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**SEPTEMBER 2010
DATA QUALITY REPORT
AND DATABASE UPDATE
GREENFIELD ENVIRONMENTAL
MULTISTATE TRUST LLC SODA SPRINGS, IDAHO FACILITY**

March 31, 2011

Prepared by:



GLOBAL ENVIRONMENTAL TECHNOLOGIES L.L.C.

SALT LAKE CITY, UTAH

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Cleanup Office

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March 31, 2011

Marc Weinreich, Vice President
Greenfield Environmental Multistate Trust LLC
1928 Eagle Crest Drive
Draper, UT 84020

**RE: TRANSMITTAL: SEPTEMBER 2010 LABORATORY DATA QUALITY REPORT
AND RD/RA DATABASE UPDATE, TRONOX INC. SODA SPRINGS, IDAHO
FACILITY**

Dear Marc:

Please find transmitted the September 2010 Data Validation Report and the updated Remedial Design/Remedial Action (RD/RA) database. This report and the updated RD/RA database are produced on CD in order to streamline report production and data transmission, and to conserve paper resources. The report is saved in Adobe Portable Document Format (.pdf) and can be viewed and printed using the commonly available Adobe Acrobat Reader™.

The RD/RA database includes ground and surface water sampling analytical results between October 1995 and September 2010. As we have previously discussed with EPA, we have removed QA/QC samples (equipment blanks, matrix spikes and matrix spike duplicates) from the RD/RA database. The RD/RA database was constructed from the master ground water analytical database that included the RI/FS results.

We appreciate the opportunity to work with you on this project. If you have any questions regarding this transmittal, please contact us.

Very truly yours,

Global Environmental Technologies, LLC

John S. Brown, P.G.
Principal/Owner

Attachments: Validation Report and Current RD/RA Database Update—CD

xc: Bill Ryan — EPA Region X — (4 hard copies; 4 -CD copies)
Doug Tanner — IDEQ Pocatello —CD copy
Dean Nygard — IDEQ Boise - CD copy
Clyde Cody - IDEQ Boise - CD copy
Cynthia Brooks - Greenfield Environmental Multistate Trust LLC - CD Copy

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(On disk)

1.0 INTRODUCTION

This data validation report presents the findings of field and laboratory data and summarizes our opinion of the quality and usability of the data for the Remedial Design/Remedial Action (RD/RA) at the former Tronox Soda Springs, Idaho facility. The property is no longer in operation and is now managed by the Greenfield Environmental Multistate Trust.

Data validation presented in this report was performed using EPA guidelines. Organic and inorganic analytical results and supporting documentation were reviewed to assess data quality and usability for samples that were collected between September 1 and September 3, 2010. The September 2010 sampling event included low-flow sampling protocols, as approved by EPA on September 23, 1997.

Samples were obtained from on-site and from off-site ground and surface water sampling locations. Sampled locations are shown on Figure 1. Field water quality measurements are presented in Table 1. Selected low flow sampling parameters obtained during stabilization of the wells are presented on Figures 2 through 19.

Appendix A to this report contains the Remedial Design/Remedial Action (RD/RA) analytical database, beginning with October 1995. This database contains analytical data supplied by the laboratory following the completion of the Remedial Investigation/Feasibility Study (RI/FS) study. The data set contained within the database in Appendix A was prepared at the request of Region 10 EPA on September 23, 1997.

Sampling procedures used during the September 2010 sampling round were performed in accordance with the approved RD/RA Sampling and Analysis Plan (SAP) dated May 1997. The evaluation criteria used were those outlined in the USEPA Laboratory Data Validation Functional Guidelines for Evaluating Organic and Inorganic Analyses. The sample names referred to in this report are those supplied by sampling personnel and used by the laboratory in labeling and reporting results.

Samples collected, collection sequence and analyses performed for the September 2010 sampling round are summarized in Table 2. Ground water parameters and analytical methods are presented in Table 3. Test America, formerly Severn Trent Laboratories (STL) Denver performed all of the laboratory analyses.

The sample identified as SEP10 is a blind duplicate collected from well KM-2. Matrix spike and matrix spike duplicate samples were obtained from well KM-11. The lab also performed selected matrix spikes and spike duplicates from wells KM-4, KM-8, KM-11 and KM-13 for selected general chemistry parameters as required for data set quality assurance and control. No equipment blanks were taken in the field. Quality assurance/quality control (QA/QC) samples were evaluated as required by the guidelines, but QA/QC samples are not incorporated into the RD/RA database. All QA/QC samples (field blanks, duplicates, and spikes) will be appended to the RDRAMASTER0910.DBF electronic data deliverable.

Some organic tentatively identified compound (TIC) names are truncated in the database column labeled "chemical name". This is a result of the CLP electronic data format provided from the laboratory that limits the reporting field length to 27 characters. This reporting format was requested by EPA at the beginning of the RI/FS. Therefore, TIC appearing to be identical in the chemical name field as the result of the field truncation should be distinguished and identified by their unique CAS number.

2.0 ORGANICS

2.1 Holding Times

The holding times for the semi-volatile (SVOA) and total petroleum hydrocarbons C-10 to C36 (TPH) analyses were assessed by comparing the sampling date with the date and time of analysis and preparation. All analyses for SVOA were performed within established (40 CFR 136) holding times, which are seven days from sample collection to extraction and forty days from extraction to analysis. Data reports indicate that extraction was performed within three days following receipt at the laboratory and analyzed within eight days following extraction.

2.2 Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance prior to sample analysis. Continuing calibration checks document satisfactory maintenance and adjustment of the instrument on a day-to-day basis. GC/MS and performance criteria are established to ensure mass resolution, identification, and sensitivity. Decafluorotriphenylphosphine (DFTPP) ion abundance criteria are used to check performance. GC/MS initial calibration review checklists indicated that the percent relative ion abundance was found to be acceptable.

An initial calibration curve is prepared for each analyte of interest. Five or more calibration standards are injected. A response factor is calculated by dividing the area of response of the characteristic ion by the concentration of each compound. Initial calibration conditions were verified by assessing the average relative response factors (RRF, ≥ 0.05) and the percent relative standard deviations (percent RSD, $\leq 35.0\%$ or percent RSD $\leq 15.0\%$ (DRO)) for each target compound. All performance criteria specified in the method were met.

The continuing calibration checks document that the instrument is giving satisfactory daily

performance. Percent D (drift) compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Results fell within the allowable percent D during the continuing calibration checks.

2.3 Blank Analysis

The assessment of blank analysis is to determine the existence and magnitude of contamination problems resulting from laboratory or field activities. A method blank was analyzed in the lab as part of the semi-volatile QA. Blank contaminant compounds included unknown compounds at trace amounts. These results were flagged as estimated in the lab (J) because the results are less than the reporting limits for these compounds.

2.4 Surrogate Spikes

Laboratory performance on individual samples is established by means of spiking the sample. Samples, laboratory control samples, laboratory control sample duplicates, and method blanks are spiked with surrogate compounds prior to sample preparation. Surrogate sample recovery must fall within the following acceptable ranges for the surrogate compounds:

<u>Compound</u>	<u>QC Limits Water (Percent)</u>
Nitrobenzene-d5	48 - 120
2-Fluorobiphenyl	38 - 120
Terphenyl-d14	50 - 120
Phenol-d5	51 - 120
2-Fluorophenol	51 - 120
2,4,6-Tribromophenol	57 - 120

The QC limits shown for water are those that have been reported to be acceptable for water analysis. Data are not qualified with respect to surrogate recovery unless 2 or more semi volatile surrogates within the same fraction (base neutral or acid fraction) are out of

specification. Percent recoveries were within acceptable range for surrogates for the samples from well KM-8.

2.5 Tentatively Identified Compounds (TIC)

Well KM-8 is the only well where ground water samples are obtained for organics analysis. TICs reported from the lab in the semi volatile analysis of ground water from well KM-8 for September 2010 included Methylene Chloride, 1,4-Dioxane, 2-Fluoro-6-nitrophenol, Phenol, 2-fluoro-4-nitro-, Naphthalene, 2,6-dimethyl-, 1(2H)-Naphthalenone, 3,4-dihydro-8-methy, and unknown compounds. Tributyl phosphate (phosphoric acid tributyl ester), a recognized COC was identified in the sample from well KM-8 at a concentration of 150 ug/l, less than the risk-based concentration.

3.0 INORGANICS

3.1 Holding Times

The holding times for inorganic samples were assessed by comparing the sampling date with the date of analysis. Holding times were met for all inorganic analyses from the September 2010 sampling event.

3.2 Method Blank

The assessment of blank analytical results is required to determine the existence and magnitude of contamination problems. Contamination in the blank associated with the September 2010 sampling round included small concentrations of barium and silver. In each case, the results were below the reporting limit but greater than the method detection limit. The lab flagged these results (B).

3.3 Laboratory Control Samples (LCS)

The LCS monitors the overall performance of the steps in the preparation and analysis process for metals and general chemistry water quality parameters. Control samples were analyzed for each batch and results ranged from 64 to 123 percent recovery. All LCS were within the established control limits for each analyte with the exception of cadmium. The laboratory control sample (LCS) for batch 33277 exceeded control limits for cadmium, which was biased high in the LCS and was not detected in the associated samples.

3.4 Matrix Spike Sample Analysis

The matrix spike sample results from metals and general water quality parameters provide information about the effect of each sample matrix on the preparation and measurement methodology. The sample obtained in the field for the matrix spike from the September 2010 round was KM-11. Matrix spikes of selected analytes from KM-18, Upper and Lower

Ledger were also performed by the lab as required by the method. The acceptable range limits for matrix spike recovery vary per analyte. Matrix spike sample results ranged from 89 to 120 percent recovery. Spikes were within the established control limits for each analyte except cadmium failed the recovery criteria high for the MS of sample KM-11(280-7722-15) in batch 280-33936. MS analysis was performed on sample 10-ACRE POND (280-7722-16) and were not in control. The associated laboratory control sample (LCS) recovery met acceptance criteria. The result was qualified in the lab.

3.5 Matrix Spike Duplicate Sample Analysis

Laboratory duplicate analyses are indicators of laboratory precision based on each sample matrix. The sample used for the matrix spike duplicate for the September 2010 round was well KM-11. Matrix spike duplicates of selected analytes from Upper and Lower Ledger and the 10-acre pond and KM-18 were also performed by the lab. The control limits for the relative percent difference (RPD) varies for metals and for general chemistry parameters. RPDs ranged from 0 to 1 percent for the metals group and 0 to 4 percent for the general chemistry parameters.

4.0 FIELD QUALITY CONTROL

One blind field duplicate (KM-2 identified as SEP10) was submitted to the laboratory for an assessment of overall field and laboratory precision. Results of the sample and blind duplicate analyses are presented in Table 4. Relative percent differences were calculated for each analyte. The RPDs for the blind duplicate results were within the acceptable 20 percent criteria for chemical parameters. Based on these results, the data are considered satisfactory for evaluation of both field and laboratory quality control.

5.0 DATA USABILITY

Completeness of the September 2010 data set was performed by calculating the percentage of valid data points to the total data set. The completeness criterion of at least 90 percent valid data was achieved. Data from the September 2010 sampling round are all considered usable for the purposes of this project for the evaluation of ground and surface water quality. Therefore, the quality objectives under the data validation guidelines for the methods used were met for laboratory analytical data. Data are considered acceptable and useable for the RD/RA evaluation of the former Tronox site.

TABLES

TABLE 1
SEPTEMBER 2010 Low Flow Sampling Field Water Quality Parameters

MAY ID	EVENT	TIME (h:m:s)	FLOW (gpm)	DTW (feet)	VOL EVAC (total gal)	pH (units)	TEMP (degrees C)	COND (umhos/cm)	TURB (NTU)	DO %	DO mg/l
KM-2	09/20/10	18:48:00		41.55	STATIC						
KM-2	09/20/10	18:49:00	0.75	41.62	0.30	7.61	9.98	1741	1.81	11.5	1.28
KM-2	09/20/10	18:51:30	0.75	41.65	2.60	7.55	9.79	1779	1.51	5.2	0.59
KM-2	09/20/10	19:00:00	0.75	41.65	8.30	7.64	10.53	1791	1.31	2.1	0.24
KM-2	09/20/10	19:04:00	0.75	41.65	12.10	7.62	10.60	1793	1.29	2.2	0.28
KM-3	09/22/10	10:59:00		30.99	STATIC						
KM-3	09/22/10	11:02:00	0.4	31.32	2.10	7.45	10.16	5972	NA	2.4	0.27
KM-3	09/22/10	11:05:00	0.4	31.28	2.80	7.42	10.60	5980	NA	2.4	0.26
KM-3	09/22/10	11:07:00	0.4	31.27	4.00	7.45	10.84	5996	NA	2.2	0.23
KM-3	09/22/10	11:09:00	0.4	31.28	4.90	7.44	11.23	6034	0.56	1.9	0.2
KM-4	09/22/10	12:31:00		41.76	STATIC						
KM-4	09/22/10	12:33:00	0.6	41.94	1.40	7.21	10.77	1492	1.71	2.7	0.3
KM-4	09/22/10	12:36:00	0.6	41.92	3.20	7.16	10.81	1522	0.61	2.4	0.26
KM-4	09/22/10	12:39:00	0.6	41.94	4.90	7.14	10.99	1658	0.39	2.4	0.26
KM-4	09/22/10	12:41:00	0.6	41.94	6.10	7.15	11.10	1774	0.46	3.1	0.33
KM-4	09/22/10	12:47:00	0.6	41.93	9.20	7.16	11.40	1895	1.16	2	0.22
KM-4	09/22/10	12:50:00	0.6	41.94	11.10	7.16	11.61	2041	0.30	1.7	0.18
KM-5	09/22/10	13:06:00		37.81	STATIC						
KM-5	09/22/10	13:08:00	0.5	37.97	1.40	7.19	11.18	1087	5.12	22.4	2.46
KM-5	09/22/10	13:10:00	0.5	37.96	2.40	7.16	11.31	1084	na	22.1	2.42
KM-5	09/22/10	13:15:00	0.5	37.97	4.80	7.15	11.55	1087	NA	21.9	2.39
KM-5	09/22/10	13:16:00	0.5	38.01	5.20	7.15	11.71	1088	NA	21.7	2.34
KM-6	09/21/10	18:52:00		29.82	STATIC						
KM-6	09/21/10	18:54:00	0.70	29.86	2.00	7.18	10.86	1178	1.80	2.5	0.27
KM-6	09/21/10	18:56:00	0.70	29.86	3.40	7.14	10.95	1180	0.48	1.7	0.19
KM-6	09/21/10	18:59:00	0.70	29.86	5.00	7.13	11.24	1185	0.34	1.8	0.2
KM-6	09/21/10	19:02:00	0.70	29.86	6.80	7.14	11.32	1186	0.41	1.7	0.19
KM-7	09/21/10	18:13:00		41.66	STATIC						
KM-7	09/21/10	18:15:00	1.2	41.88	1.20	7.24	10.63	935	1.28	2.9	0.32
KM-7	09/21/10	18:19:00	1.2	41.68	5.10	7.11	11.32	920	0.42	11.3	1.15
KM-7	09/21/10	18:21:00	1.2	41.69	7.20	7.12	11.43	916	0.40	3.8	0.41
KM-7	09/21/10	18:24:00	1.2	41.68	9.00	7.13	11.53	917	0.57	5.1	0.56
KM-8	09/22/10	13:56:00		33.65	STATIC						
KM-8	09/22/10	13:58:00	0.4	33.95	0.40	6.98	10.04	10870	79.30	4.6	0.49
KM-8	09/22/10	14:00:00	0.4	33.96	2.10	6.96	9.89	11070	144.00	3.8	0.42
KM-8	09/22/10	14:05:00	0.4	33.97	4.30	6.94	10.30	11450	195.00	3.6	0.38
KM-8	09/22/10	14:12:00	0.4	33.95	6.10	6.94	11.11	12060	198.00	4.3	0.46
KM-8	09/22/10	14:15:00	0.4	33.94	7.20	6.94	11.42	12540	206.00	3.8	0.4
KM-9	09/21/10	17:17:00		34.17							
KM-9	09/21/10	17:23:00	0.35	34.52	2.40	7.28	11.22	829	1.66	2.6	0.29
KM-9	09/21/10	17:25:00	0.35	34.49	2.70	7.18	11.43	828	1.82	2.8	0.31
KM-9	09/21/10	17:27:00	0.35	34.48	3.50	7.17	11.58	827	1.46	2.4	0.26
KM-9	09/21/10	17:29:00	0.35	34.48	4.10	7.19	11.88	826	1.08	2.4	0.27

TABLE 1
SEPTEMBER 2010 Low Flow Sampling Field Water Quality Parameters

MAY ID	EVENT	TIME (h:m:s)	FLOW (gpm)	DTW (feet)	VOL EVAC (total gal)	pH (units)	TEMP (degrees C)	COND (umhos/cm)	TURB (NTU)	DO %	DO mg/l
KM-11	09/22/10	11:39:30		30.52	STATIC						
KM-11	09/22/10	11:44:00	0.6	30.63	2.30	7.13	10.16	1102	1.74	2.1	0.24
KM-11	09/22/10	11:46:00	0.6	30.67	4.10	7.16	10.43	1101	1.12	1.5	0.17
KM-11	09/22/10	11:49:00	0.6	30.68	5.20	7.15	10.76	1092	0.77	1.6	0.18
KM-11	09/22/10	11:53:00	0.6	30.68	7.70	7.09	11.11	1081	0.45	1.8	0.2
KM-12	09/22/10	14:33:00		32.14	STATIC						
KM-12	09/22/10	14:34:30	0.7	32.20	0.50	7.24	9.86	1250	0.81	3.9	0.44
KM-12	09/22/10	14:37:00	0.7	32.22	3.30	7.11	9.89	1226	0.42	2.6	0.29
KM-12	09/22/10	14:40:00	0.7	32.23	4.90	7.11	10.18	1210	0.34	1.9	0.21
KM-12	09/22/10	14:42:00	0.7	32.22	6.10	7.11	10.42	1202	0.24	2	0.22
KM-13	09/21/10	17:43:00		33.76	STATIC						
KM-13	09/21/10	17:45:00	0.35	33.94	0.20	7.41	12.47	914	0.82	25.1	2.66
KM-13	09/21/10	17:48:00	0.35	33.96	1.70	7.37	11.18	873	0.29	6.4	0.71
KM-13	09/21/10	17:57:00	0.35	33.94	2.40	7.28	11.44	898	0.43	3.7	0.41
KM-13	09/21/10	17:55:00	0.35	33.96	4.10	7.33	12.12	892	0.38	3	0.33
KM-15	09/21/10	16:32:00		42.40	STATIC						
KM-15	09/21/10	16:34:00	0.5	42.65	1.50	7.23	10.71	926	2.03	5.7	0.62
KM-15	09/21/10	16:36:00	0.5	42.63	2.30	7.17	10.70	926	1.02	3	0.33
KM-15	09/21/10	16:38:30	0.5	42.66	2.70	7.13	10.84	924	0.51	1.7	0.19
KM-15	09/21/10	16:44:00	0.5	42.65	6.30	7.13	11.25	914	0.22	1.9	0.21
KM-16	09/21/10	15:46:00		59.26	STATIC						
KM-16	09/21/10	15:48:00	0.4	59.35	1.20	7.14	11.16	1102	1.03	6.7	0.73
KM-16	09/21/10	15:52:00	0.4	59.35	2.30	7.11	10.93	1092	0.93	4.7	0.51
KM-16	09/21/10	15:55:00	0.4	59.35	3.30	7.11	11.31	1091	0.76	3.2	0.35
KM-16	09/21/10	15:59:00	0.4	59.34	5.10	7.12	12.42	1095	0.70	2.5	0.26
KM-17	09/21/10	15:05:00		28.15	STATIC						
KM-17	09/21/10	15:07:30	0.3	28.40	1.30	7.19	11.58	1203	0.87	2.5	0.28
KM-17	09/21/10	15:10:30	0.3	28.37	2.40	7.22	11.47	1189	0.53	2.3	0.25
KM-17	09/21/10	15:15:00	0.3	28.39	4.10	7.22	12.19	1179	0.54	1.8	0.2
KM-17	09/21/10	15:22:00	0.3	28.41	5.40	7.25	12.99	1119	0.33	1.7	0.18
KM-18	10/07/10	17:16:00		63.36	STATIC						
KM-18	10/07/10	17:17:30	0.7	63.57	2.30	na	na	na	18.70	na	na
KM-18	10/07/10	17:24:30	0.7	63.60	7.10	na	na	na	1.00	na	na
KM-18	10/07/10	17:40:00	0.7	63.62	18.60	na	na	na	1.20	na	na
KM-19	09/22/10	14:51:00		32.26	STATIC						
KM-19	09/22/10	14:53:00	0.75	32.30	2.10	7.19	9.82	900	0.49	55.6	6.35
KM-19	09/22/10	14:55:00	0.75	32.31	3.40	7.17	9.75	894	0.46	72.5	8.19
KM-19	09/22/10	14:58:00	0.75	32.31	5.40	7.17	9.87	888	7.69	66.2	7.38
KM-19	09/22/10	15:02:00	0.75	32.31	8.30	7.16	10.22	887	6.62	66	7.41

TABLE 2
GROUND AND SURFACE WATER
SAMPLE COLLECTION AND ANALYSIS

Well ID or Spring Name	Total Depth of Well (ft)	Sampling Sequence	General Indicators, Anion, and Cations	Unfiltered Metals	SVOCs	TPH
KM-1	56	Not Sampled	X	X		
KM-2	57	5	X	X		
KM-3	49	13	X	X		
KM-4	54	15	X	X		
KM-5	48	16	X	X		
KM-6	45	12	X	X		
KM-7	56	11	X	X		
KM-8	45	17	X	X	X	X
KM-9	58	9	X	X		
KM-10	120	Not Sampled	X	X		
KM-11	100	14	X	X		
KM-12	155	18	X	X		
KM-13	56	10	X	X		
KM-15	54	6	X	X		
KM-16	73	8	X	X		
KM-17	48	7	X	X		
KM-18	172	20	X	X		
KM-19	218	19	X	X		
Finch Spring	N/A	2	X	X		
Big Spring	N/A	1	X	X		
Upper Ledger Spring	N/A	3	X	X		
Lower Ledger Spring	N/A	4	X	X		

TABLE 3
GROUND WATER PARAMETER AND ANALYTICAL METHODS

Analyte	Analytical Method (1,2)	Holding Time	Reporting Limit (3)
Alkalinity	SM2320B	14 Days	5.0 mg/l
Total Dissolved Solids	2540C	7 Days	10.0 mg/l
Turbidity	N/A	Analyze in field	
pH	N/A	Analyze in field	
Specific Conductance	2510B	28 Days	2.0 umhos/cm
Ion Balance	1030F & API		
Bicarbonate	SM2320B	14 Days	5.0 mg/l
Carbonate	SM2320B	14 Days	5.0 mg/l
Chloride	300.0A	28 Days	3.0 mg/l
Fluoride	340.2	28 Days	0.1 mg/l
Nitrate+Nitrite	353.2	28 Days	0.1 mg/l
Sulfate	300.0A	28 Days	5.0 mg/l
Total Metals			
Metals Digestion	SW846 3010A		
Calcium	SW846 6010B	6 Months	200 ug/l
Magnesium	SW846 6010B	6 Months	200 ug/l
Potassium	SW846 6010B	6 Months	500 ug/l
Sodium	SW846 6010B	6 Months	2000 ug/l
Total Aluminum	SW846 6010B	6 Months	100 ug/l
Total Arsenic	6020 (ICP/MS)	6 Months	5.0 ug/l
Total Barium	SW846 6010B	6 Months	10 ug/l
Total Cadmium	SW846 6010B	6 Months	5.0 ug/l
Total Cobalt	SW846 6010B	6 Months	10 ug/l
Total Copper	SW846 6010B	6 Months	20 ug/l
Total Manganese	SW846 6010B	6 Months	10 ug/l
Total Iron	SW846 6010B	6 Months	10 ug/l
Total Molybdenum	SW846 6010B	6 Months	20 ug/l
Total Nickel	SW846 6010B	6 Months	40 ug/l
Total Silver	SW846 6010B	6 Months	10 ug/l
Total Vanadium	SW846 6010B	6 Months	10 ug/l
Organics	Analytical Method (1,2)	Holding Time	Reporting Limit (3)
TPH C-10 – C-36	SW846 6010B	28 Days	1.0 mg/l
Semi-Volatile Organic Compounds	8270C	7 Days (extraction) 40 Days (analysis)	Compound/ dilution-specific

TABLE 3
GROUND WATER PARAMETER AND ANALYTICAL METHODS
(Continued)

1. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Office of Solid Waste, U.S. Environmental Protection Agency, Document Control No. 995-001-00000-1, 1986.
2. Methods for Chemical Analysis of Water and Waste, EPA-600/4-79/020, EMSL, Cincinnati, OH, 1983.
3. Reporting Limits, reported by STL, October 2004. Reporting limits vary with dilution.

TABLE 4

September 2010 Blind Duplicate Sample Relative Percent Difference

PROJECT ID	SAMPLE ID	DATE	CAS NO.	CHEMICAL NAME	VALUE	UNITS	DET. LIMIT	DET. QUAL	QUAL	VALIDATION	ALIQOT
280-7722-13	KM-2	9/20/10	477923700	Alkalinity, Bicarb. as CaCO ₃ at pH 4.5	400	mg/L	5				SA
280-7722-12	10-Sep	9/21/10	477923700	Alkalinity, Bicarb. as CaCO ₃ at pH 4.5	410	mg/L	5				SA
280-7722-13	KM-2	9/20/10	477730600	Alkalinity, Carb. CaCO ₃ at pH 8.3	ND	mg/L	5				SA
280-7722-12	10-Sep	9/21/10	477730600	Alkalinity, Carb. CaCO ₃ at pH 8.3	ND	mg/L	5				SA
RPD					ND						
280-7722-13	KM-2	9/20/10	477423700	Alkalinity, Hydrox, as CaCO ₃	ND	mg/L	5				SA
280-7722-12	10-Sep	9/21/10	477423700	Alkalinity, Hydrox, as CaCO ₃	ND	mg/L	5				SA
RPD					ND						
280-7722-13	KM-2	9/20/10	477520600	Alkalinity, Total as CaCO ₃ at pH 4.5	400	mg/L	5				SA
280-7722-12	10-Sep	9/21/10	477520600	Alkalinity, Total as CaCO ₃ at pH 4.5	410	mg/L	5				SA
RPD					2.47						
280-7722-13	KM-2	9/20/10	7429-90-5	Aluminum	ND	ug/L	100				SA
280-7722-12	10-Sep	9/21/10	7429-90-5	Aluminum	ND	ug/L	100				SA
RPD					ND						
280-7722-13	KM-2	9/20/10	STL00809	Anion/Cation Balance	-6.3	%					SA
280-7722-12	10-Sep	9/21/10	STL00809	Anion/Cation Balance	-9.2	%					SA
RPD					37.42						
280-7722-13	KM-2	9/20/10	7440-38-2	Arsenic	11	ug/L	5				SA
280-7722-12	10-Sep	9/21/10	7440-38-2	Arsenic	11	ug/L	5				SA
RPD					0.00						
280-7722-13	KM-2	9/20/10	7440-39-3	Barium	41	ug/L	10				SA
280-7722-12	10-Sep	9/21/10	7440-39-3	Barium	40	ug/L	10				SA
RPD					2.47						
280-7722-13	KM-2	9/20/10	7440-43-9	Cadmium	ND	ug/L	5	*			SA
280-7722-12	10-Sep	9/21/10	7440-43-9	Cadmium	ND	ug/L	5	*			SA
RPD					ND						
280-7722-13	KM-2	9/20/10	7440-70-2	Calcium	76000	ug/L	200				SA
280-7722-12	10-Sep	9/21/10	7440-70-2	Calcium	72000	ug/L	200				SA
RPD					5.41						
280-7722-13	KM-2	9/20/10	16887-00-6	Chloride	200	mg/L	15				SA
280-7722-12	10-Sep	9/21/10	16887-00-6	Chloride	200	mg/L	15				SA
RPD					0.00						
280-7722-13	KM-2	9/20/10	7440-48-4	Cobalt	ND	ug/L	10				SA
280-7722-12	10-Sep	9/21/10	7440-48-4	Cobalt	ND	ug/L	10				SA
RPD					ND						

TABLE 4

September 2010 Blind Duplicate Sample Relative Percent Difference

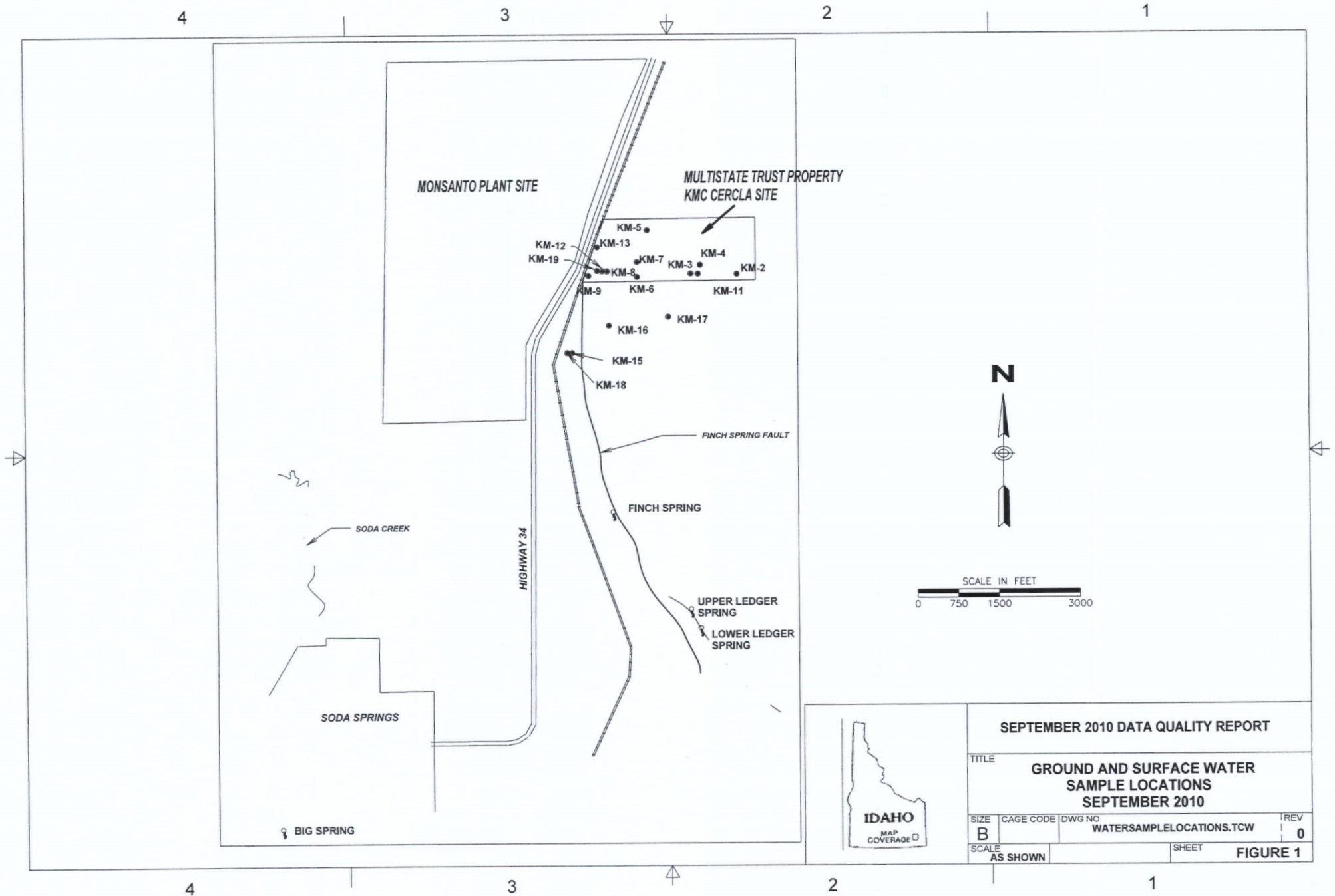
PROJECT ID	SAMPLE ID	DATE	CAS NO.	CHEMICAL NAME	VALUE	UNITS	DET. LIMIT	DET. QUAL.	QUAL	VALIDATION	ALIQOT
280-7722-13	KM-2	9/20/10	7440-50-8	Copper	1.8	ug/L	15	J			SA
280-7722-12	10-Sep	9/21/10	7440-50-8	Copper	ND	ug/L	15				SA
RPD					ND						
280-7722-13	KM-2	9/20/10	66300	Fluoride	0.32	mg/L	0.5	J			SA
280-7722-12	10-Sep	9/21/10	66300	Fluoride	0.33	mg/L	0.5	J			SA
RPD					3.08						
280-7722-13	KM-2	9/20/10	5597414200	Ion Balance Difference	-6.3	%					SA
280-7722-12	10-Sep	9/21/10	5597414200	Ion Balance Difference	-9.2	%					SA
RPD					37.42						
280-7722-13	KM-2	9/20/10	7439-95-4	Magnesium	25000	ug/L	200				SA
280-7722-12	10-Sep	9/21/10	7439-95-4	Magnesium	24000	ug/L	200				SA
RPD					4.08						
280-7722-13	KM-2	9/20/10	7439-96-5	Manganese	38	ug/L	10				SA
280-7722-12	10-Sep	9/21/10	7439-96-5	Manganese	36	ug/L	10				SA
RPD					5.41						
280-7722-13	KM-2	9/20/10	7439-98-7	Molybdenum	860	ug/L	20				SA
280-7722-12	10-Sep	9/21/10	7439-98-7	Molybdenum	830	ug/L	20				SA
RPD					3.55						
280-7722-13	KM-2	9/20/10	7440-02-0	Nickel	3.8	ug/L	40	J			SA
280-7722-12	10-Sep	9/21/10	7440-02-0	Nickel	4	ug/L	40	J			SA
RPD					5.13						
280-7722-13	KM-2	9/20/10	1005	Nitrate plus Nitrite as N	8.9	mg/L	0.2				SA
280-7722-12	10-Sep	9/21/10	1005	Nitrate plus Nitrite as N	8.9	mg/L	0.2				SA
RPD					0.00						
280-7722-13	KM-2	9/20/10	9/7/7440	Potassium	19000	ug/L	3000				SA
280-7722-12	10-Sep	9/21/10	9/7/7440	Potassium	18000	ug/L	3000				SA
RPD					5.41						
280-7722-13	KM-2	9/20/10	7440-22-4	Silver	ND	ug/L	10				SA
280-7722-12	10-Sep	9/21/10	7440-22-4	Silver	ND	ug/L	10				SA
RPD					ND						
280-7722-13	KM-2	9/20/10	7440-23-5	Sodium	220000	ug/L	1000				SA
280-7722-12	10-Sep	9/21/10	7440-23-5	Sodium	210000	ug/L	1000				SA
RPD					4.65						
280-7722-13	KM-2	9/20/10	1011	Specific Conductance at 25 deg C	1800	umhos/cm	2				SA
280-7722-12	10-Sep	9/21/10	1011	Specific Conductance at 25 deg C	1800	umhos/cm	2				SA
RPD					0.00						

TABLE 4

September 2010 Blind Duplicate Sample Relative Percent Difference

PROJECT ID	SAMPLE ID	DATE	CAS NO.	CHEMICAL NAME	VALUE	UNITS	DET. LIMIT	DET. QUAL	QUAL	VALIDATION	ALIQOT
280-7722-13	KM-2	9/20/10	3035	Sulfate	180	mg/L	25				SA
280-7722-12	10-Sep	9/21/10	3035	Sulfate	180	mg/L	25				SA
RPD					0.00						
280-7722-13	KM-2	9/20/10	520200	Total Anions	18	meq/L					SA
280-7722-12	10-Sep	9/21/10	520200	Total Anions	18	meq/L					SA
RPD					0.00						
280-7722-13	KM-2	9/20/10	5201700	Total Cations	16	meq/L					SA
280-7722-12	10-Sep	9/21/10	5201700	Total Cations	15	meq/L					SA
RPD					6.45						
280-7722-13	KM-2	9/20/10	1010	Total Dissolved Solids	920	mg/L	10				SA
280-7722-12	10-Sep	9/21/10	1010	Total Dissolved Solids	940	mg/L	10				SA
RPD					2.15						
280-7722-13	KM-2	9/20/10	7440-62-2	Vanadium	3900	ug/L	10				SA
280-7722-12	10-Sep	9/21/10	7440-62-2	Vanadium	3700	ug/L	10				SA
RPD					5.26						

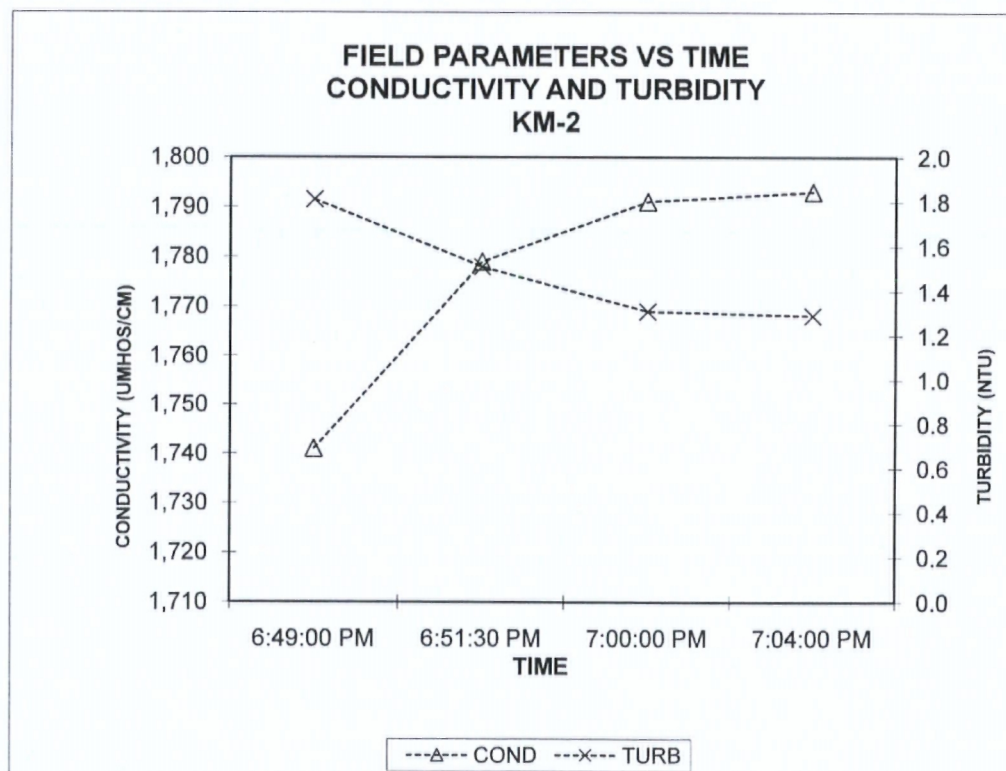
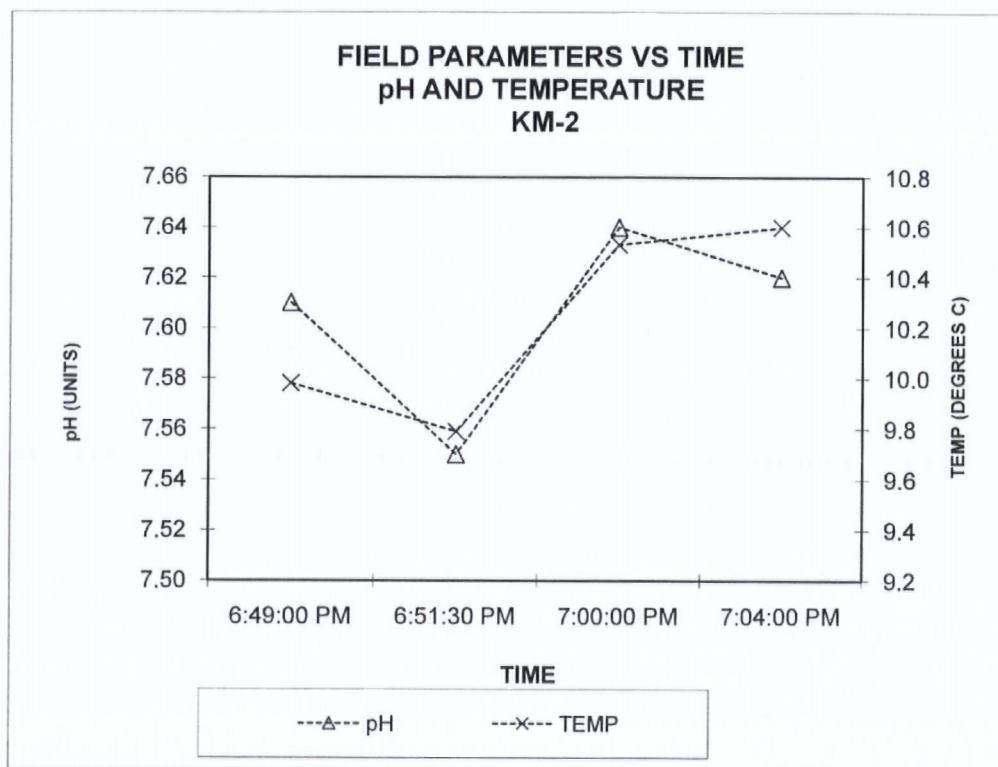
FIGURES

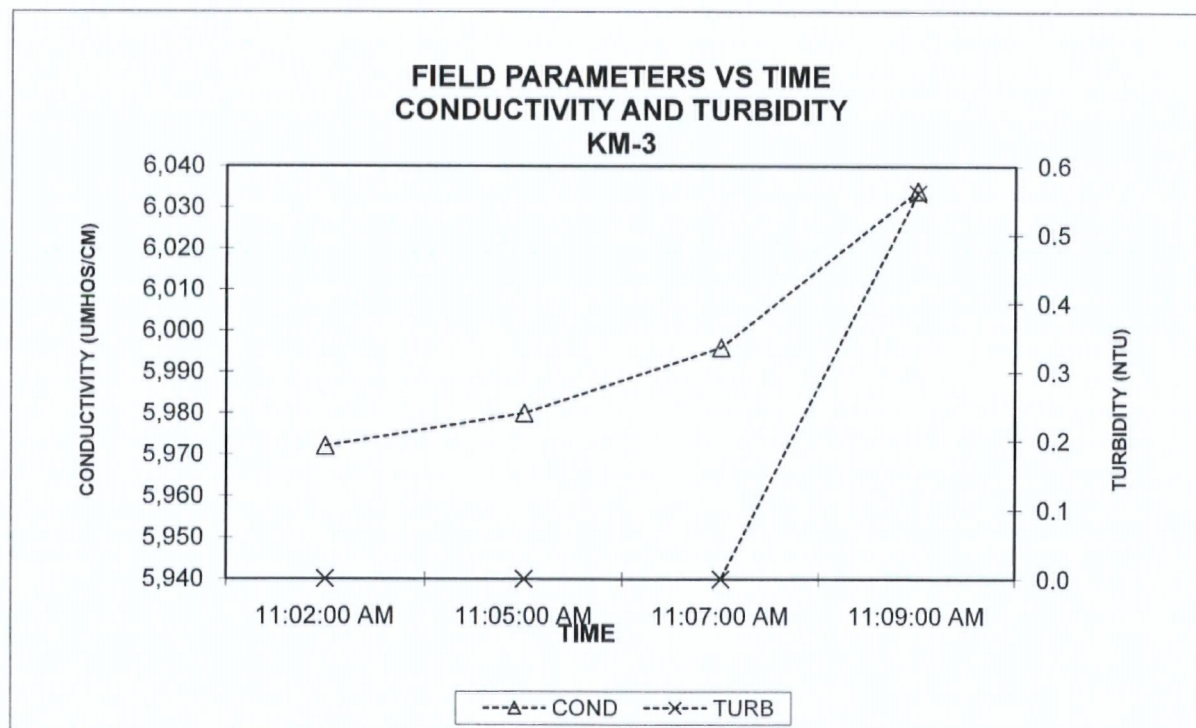
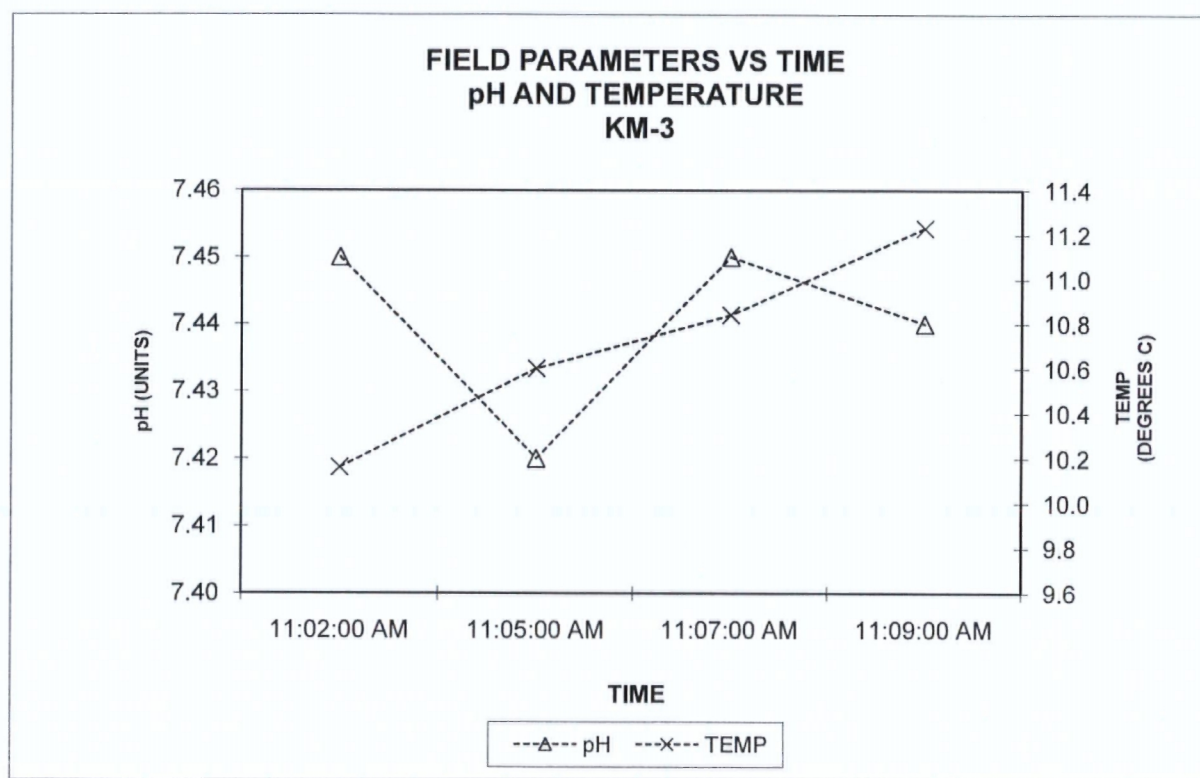


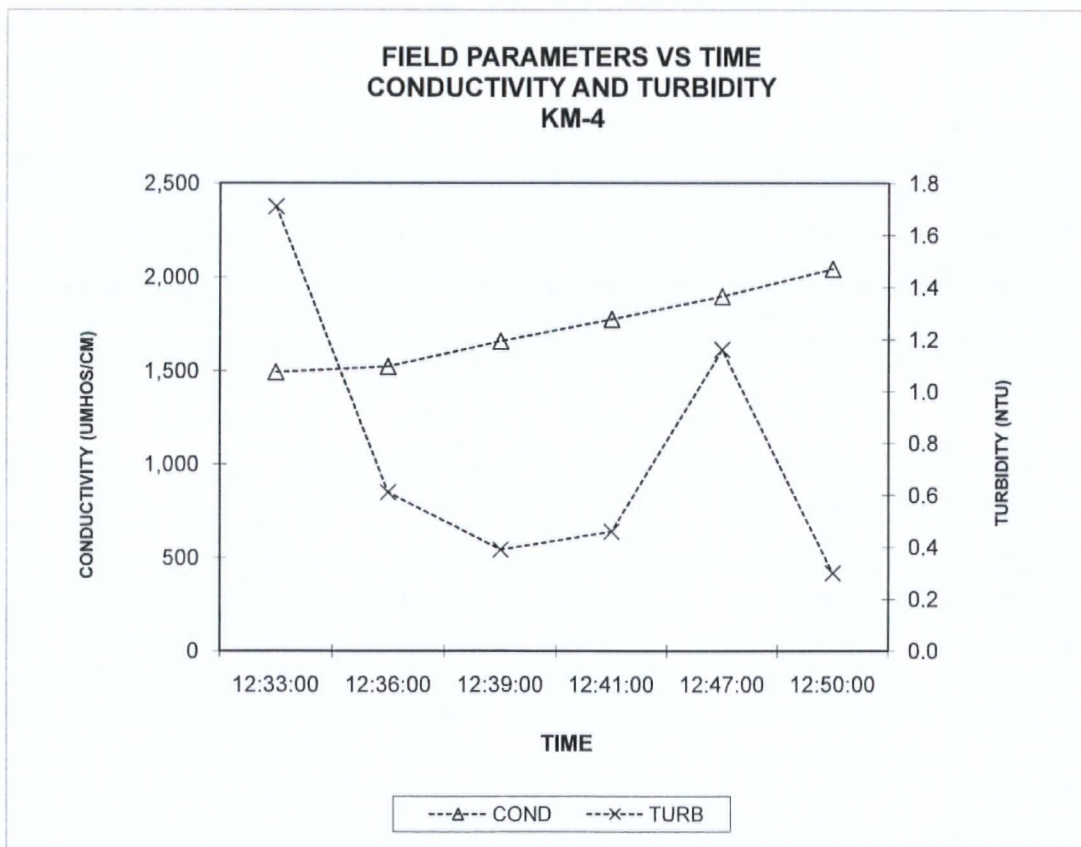
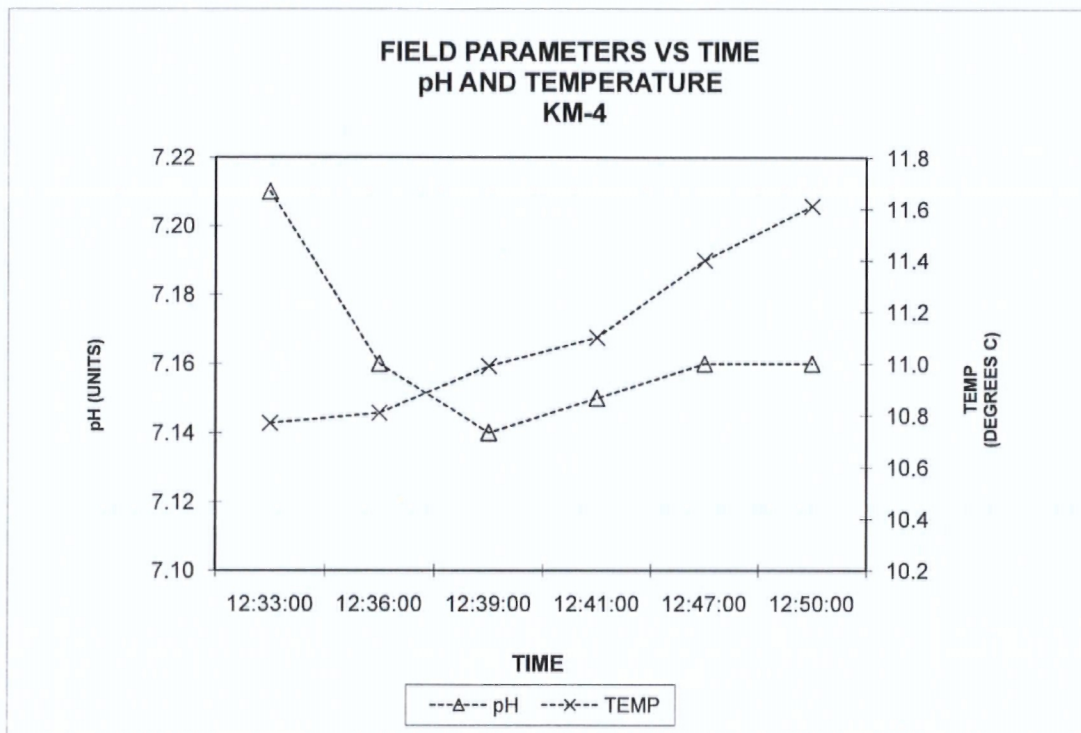
SEPTEMBER 2010 DATA QUALITY REPORT

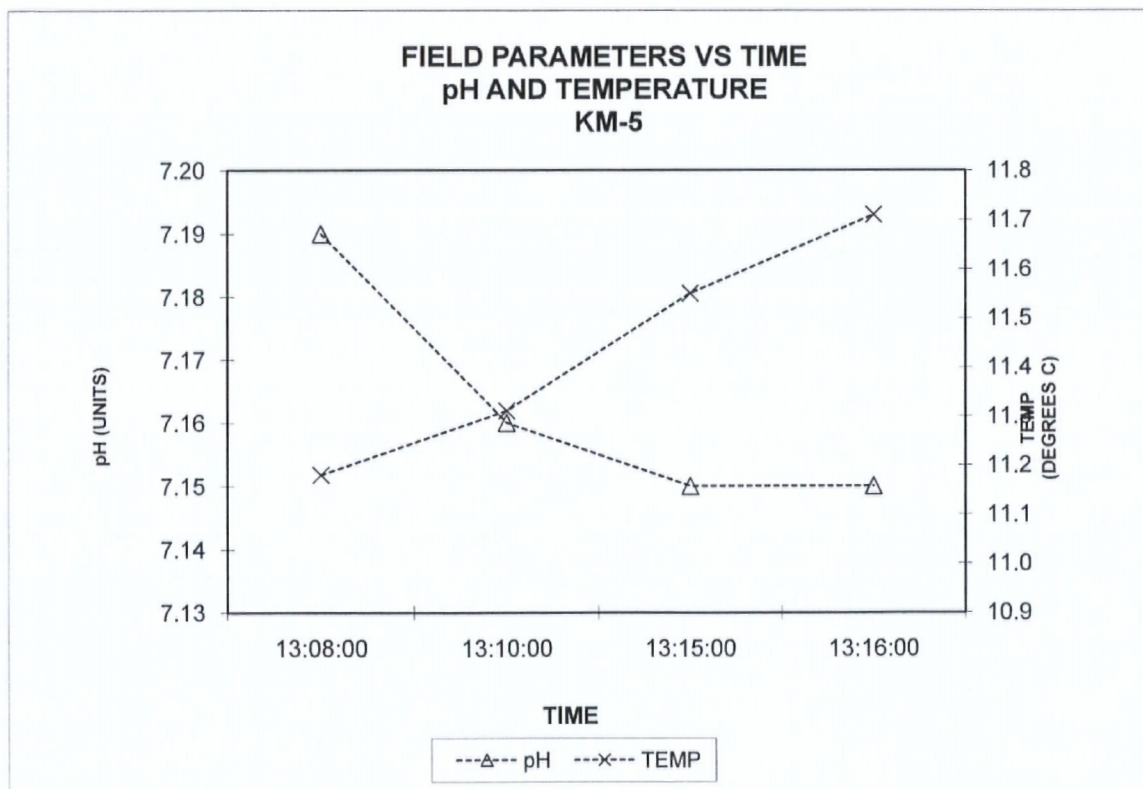
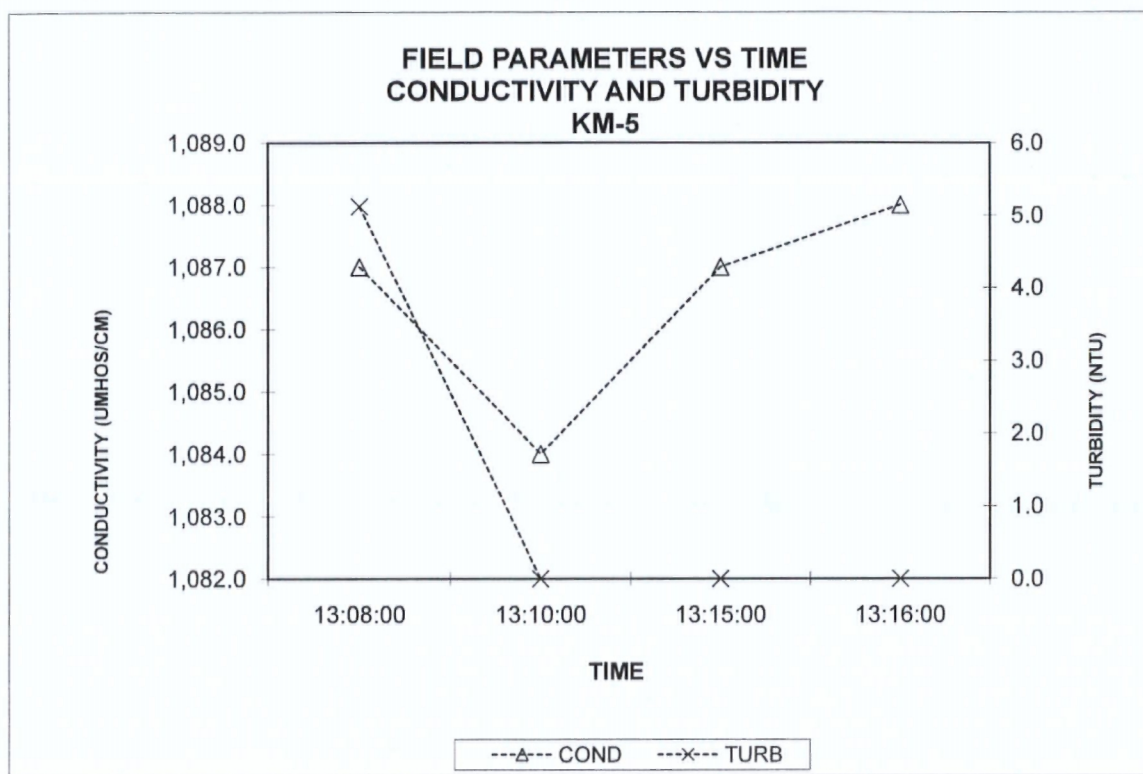
TITLE
**GROUND AND SURFACE WATER
SAMPLE LOCATIONS
SEPTEMBER 2010**

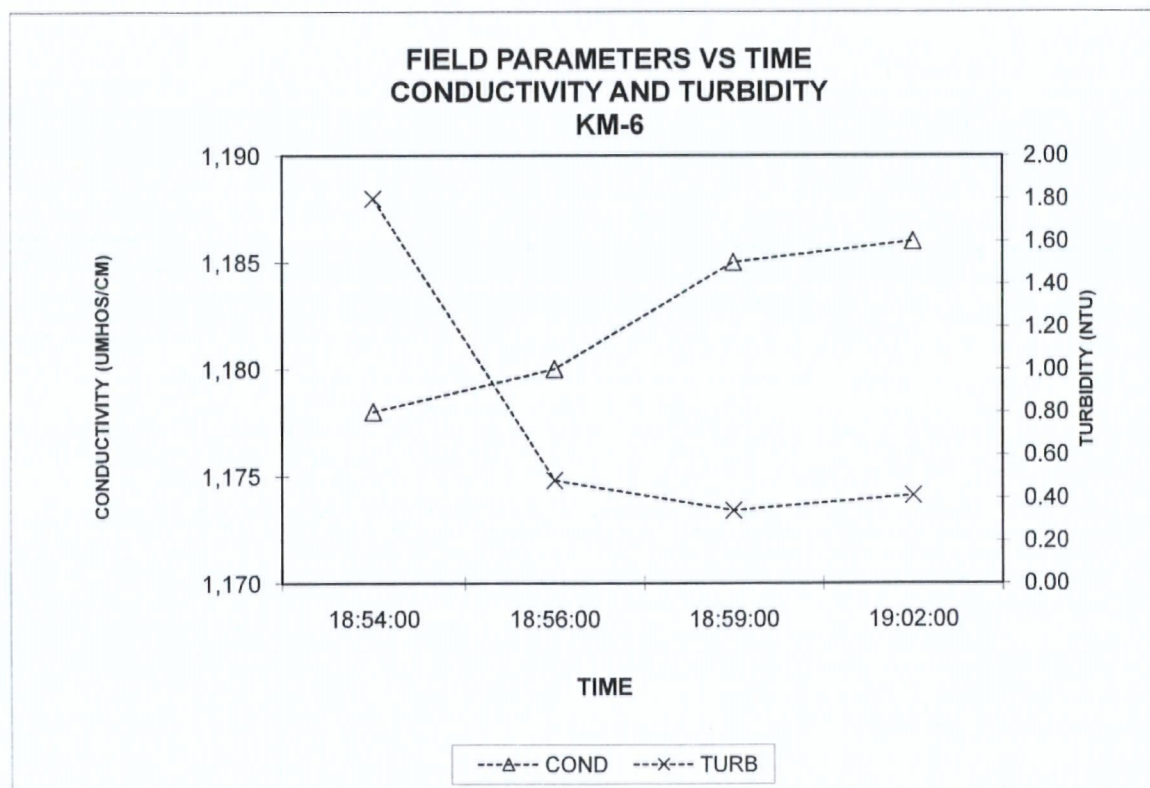
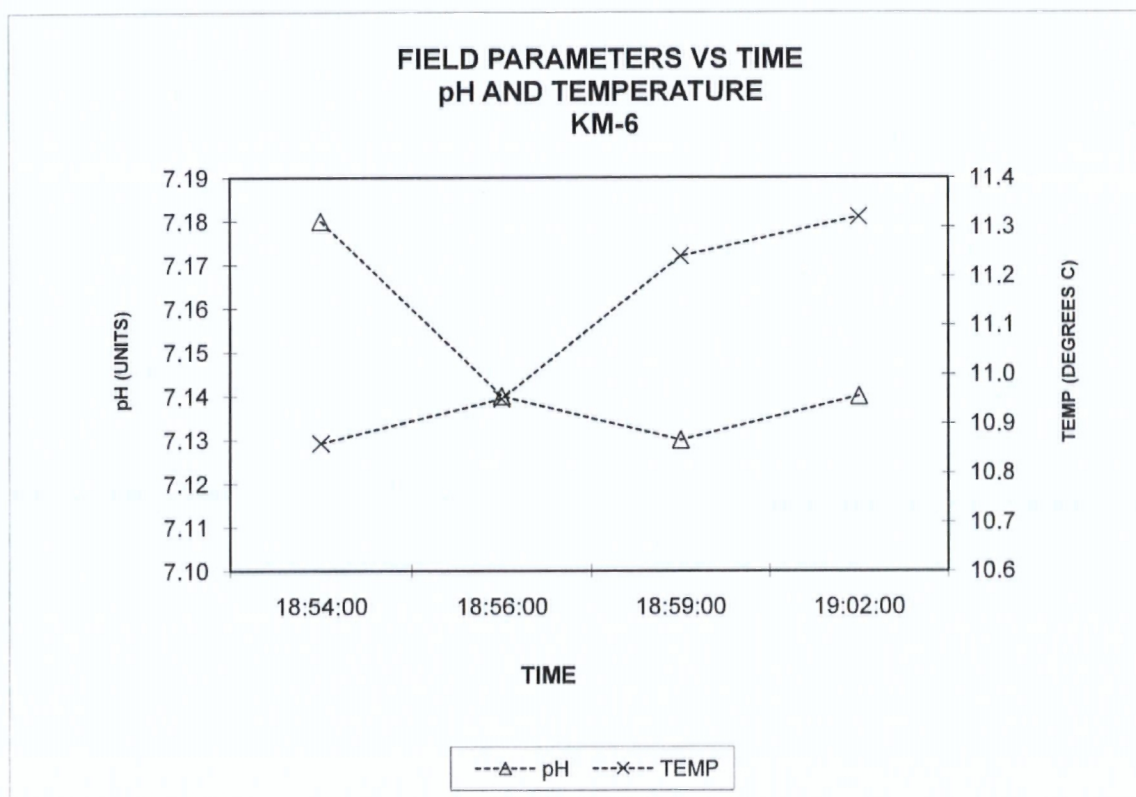
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SCALE AS SHOWN		SHEET FIGURE 1	

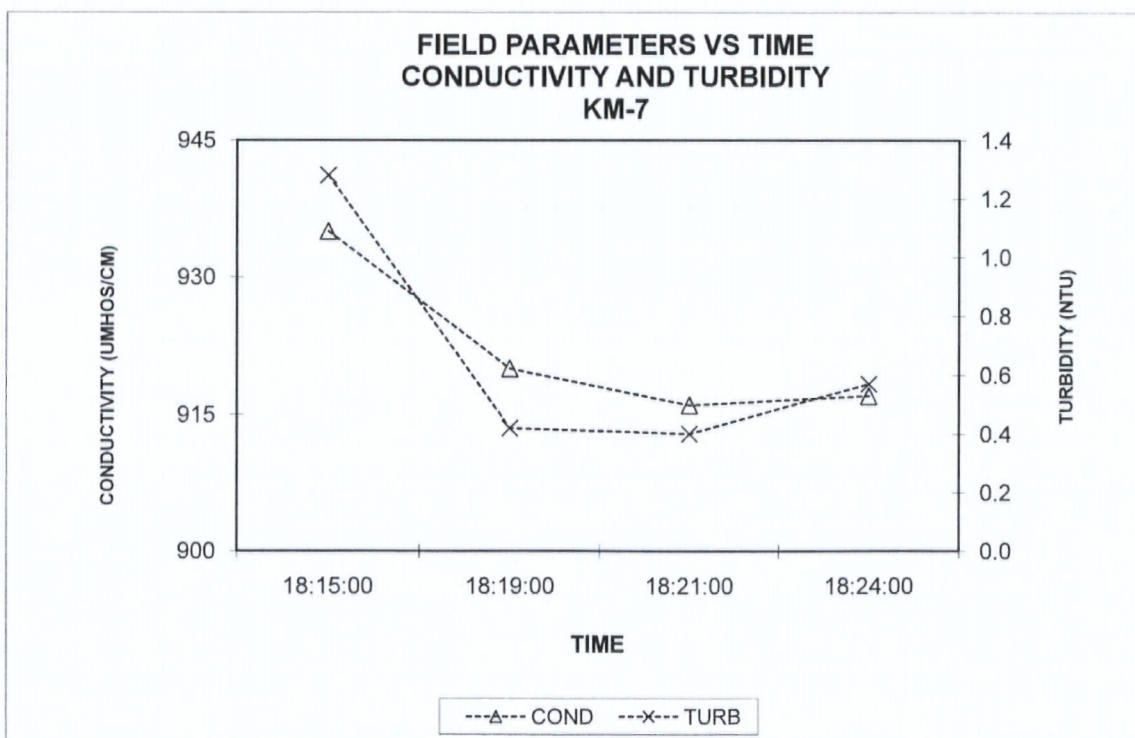
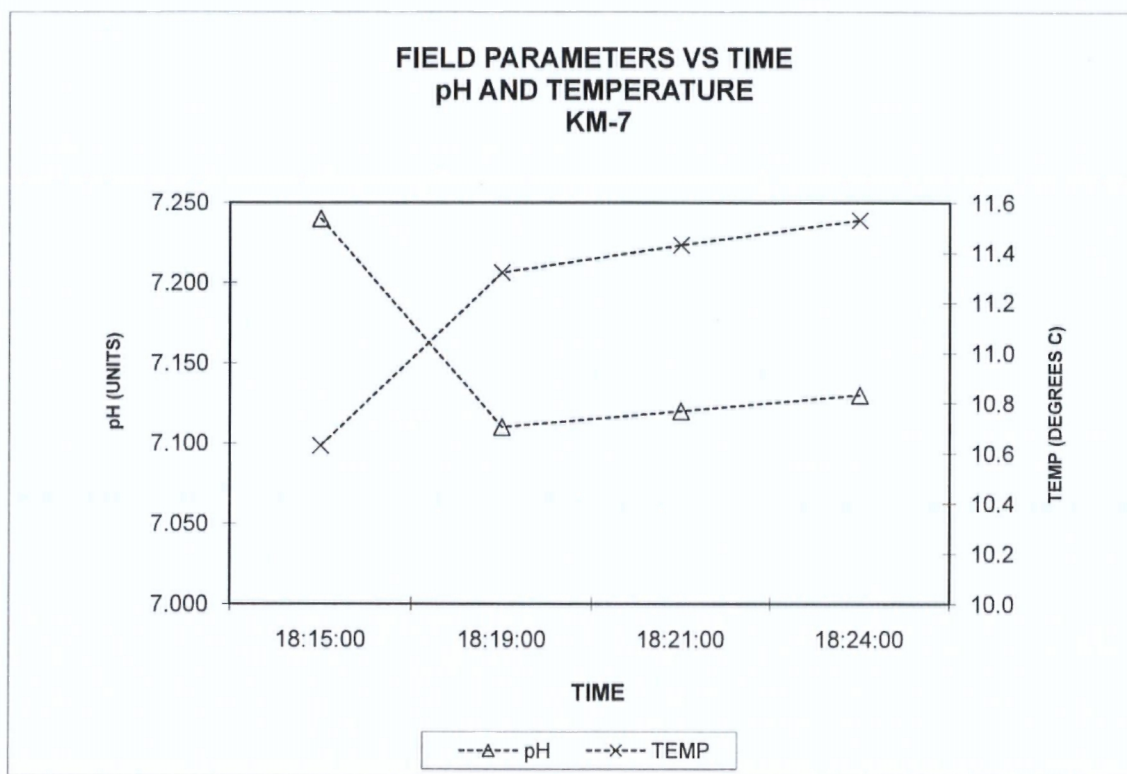


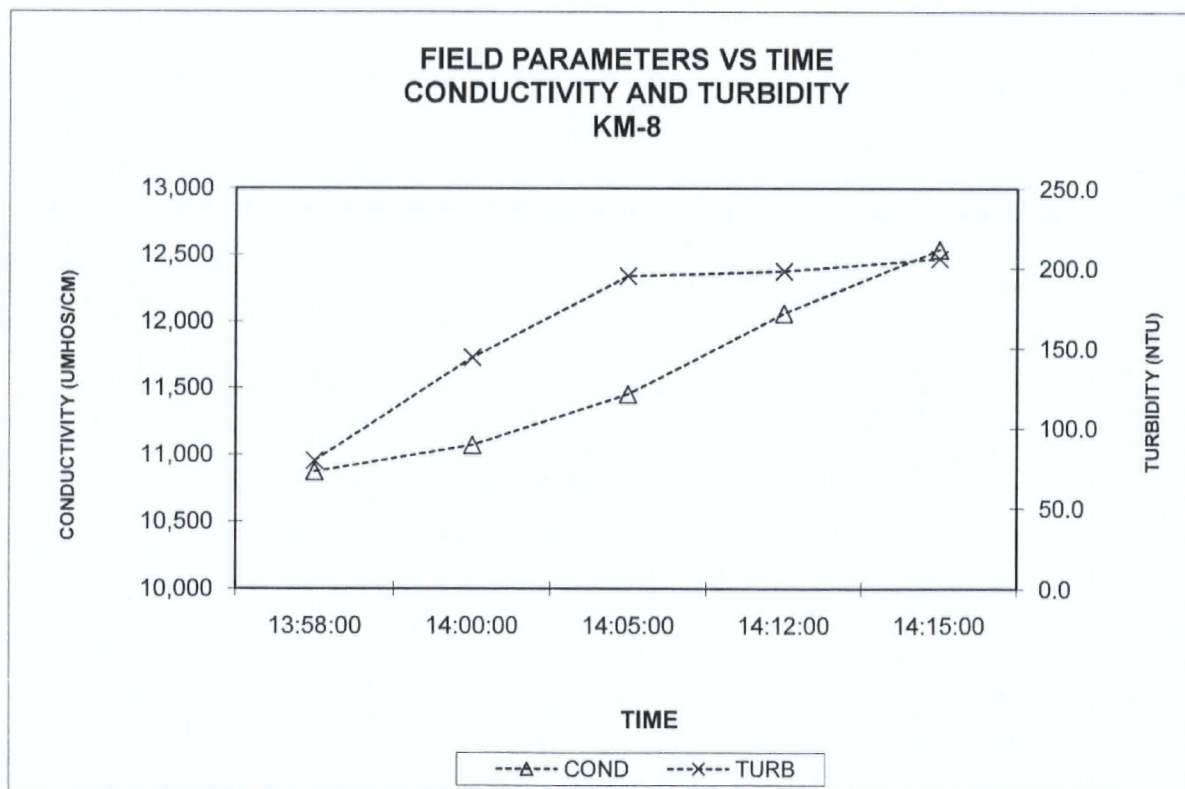
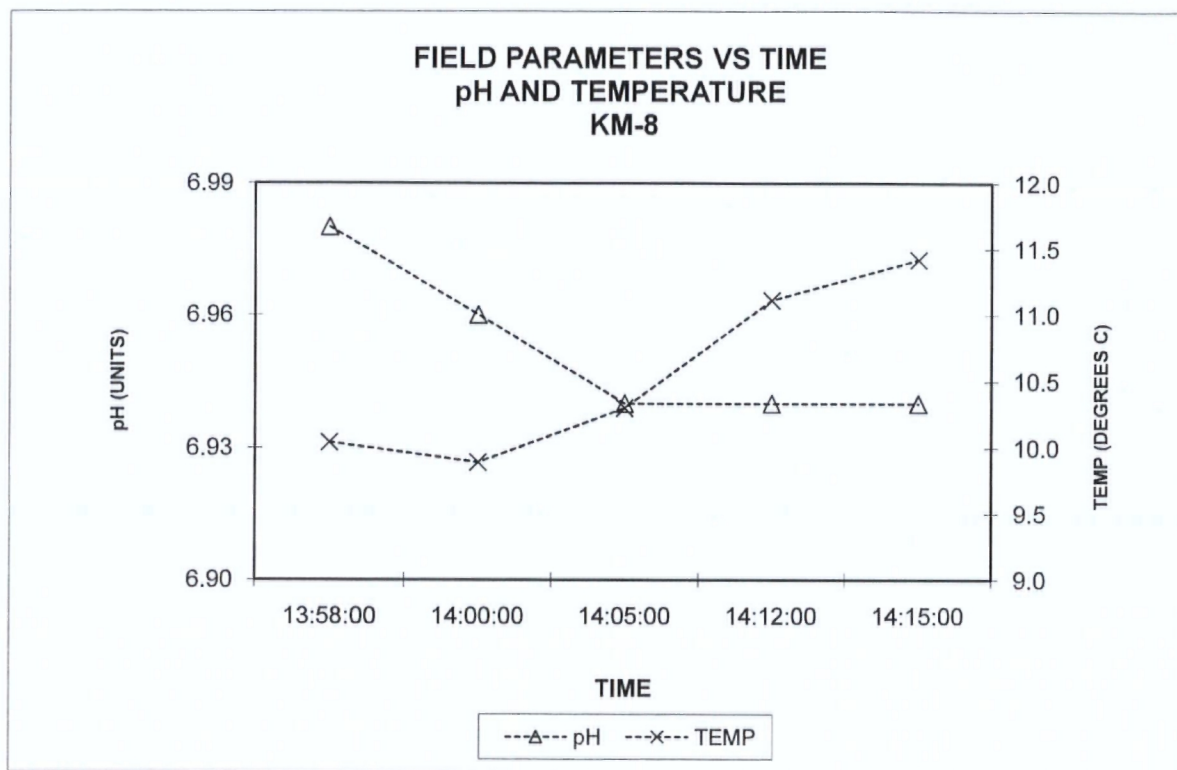


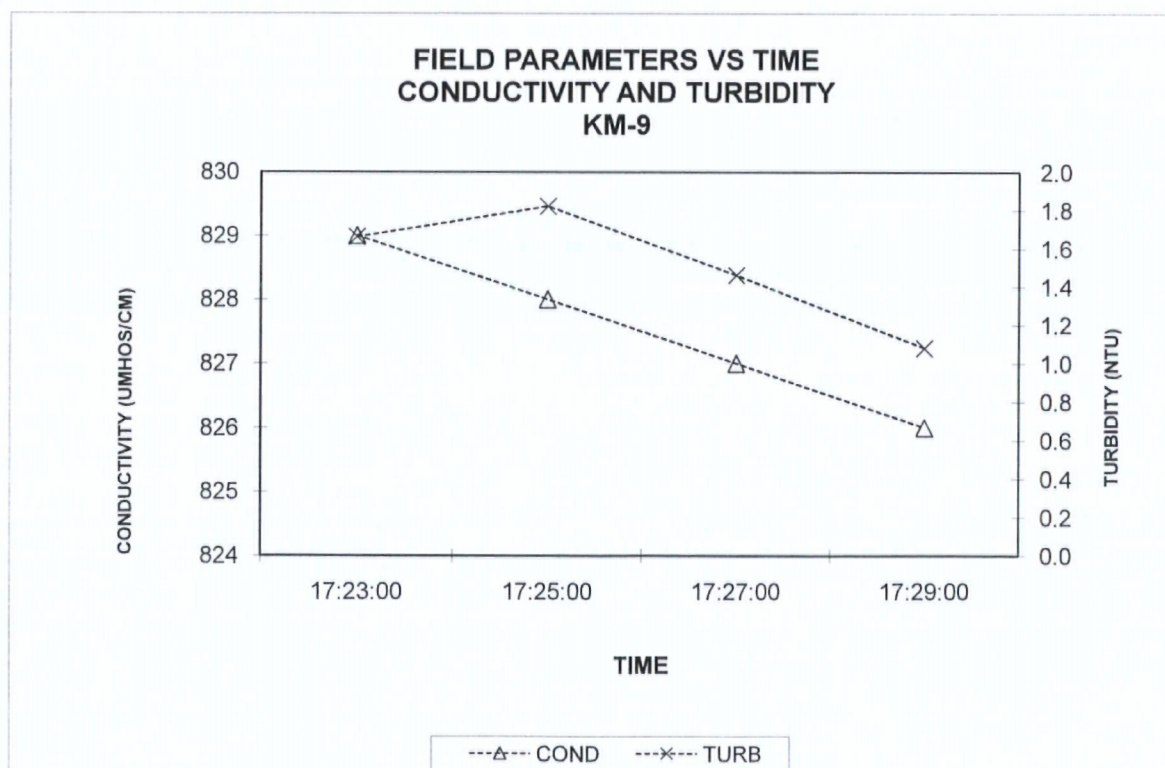
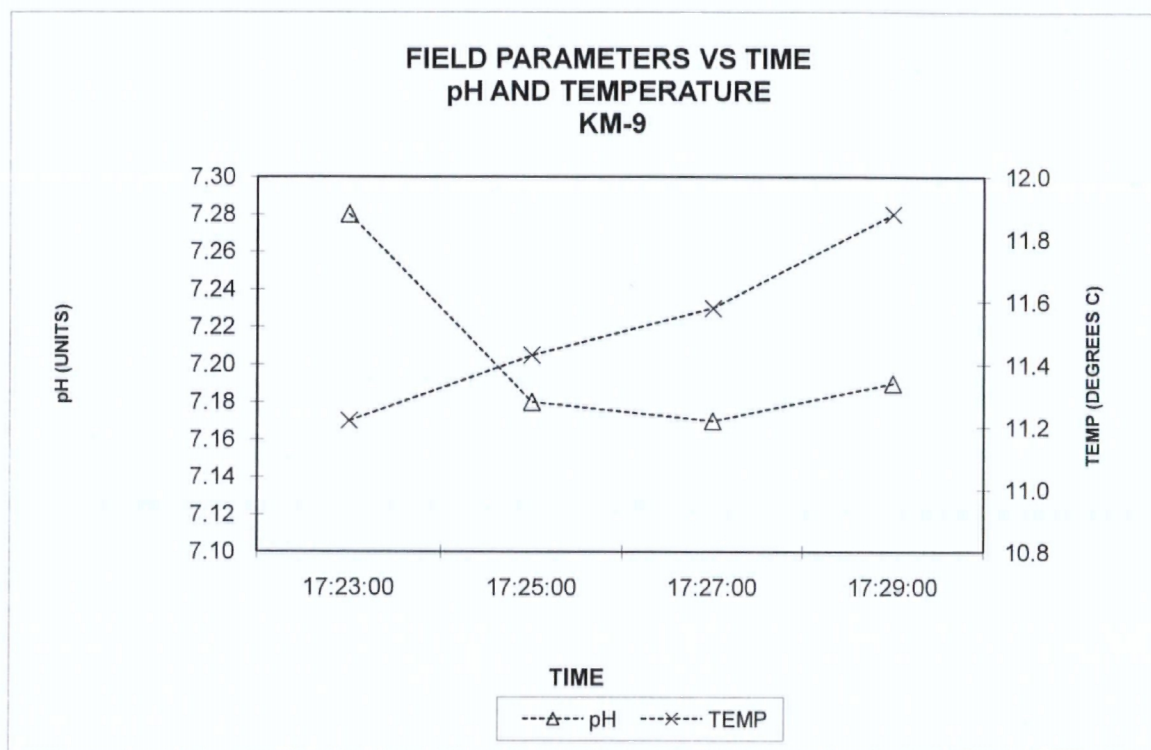












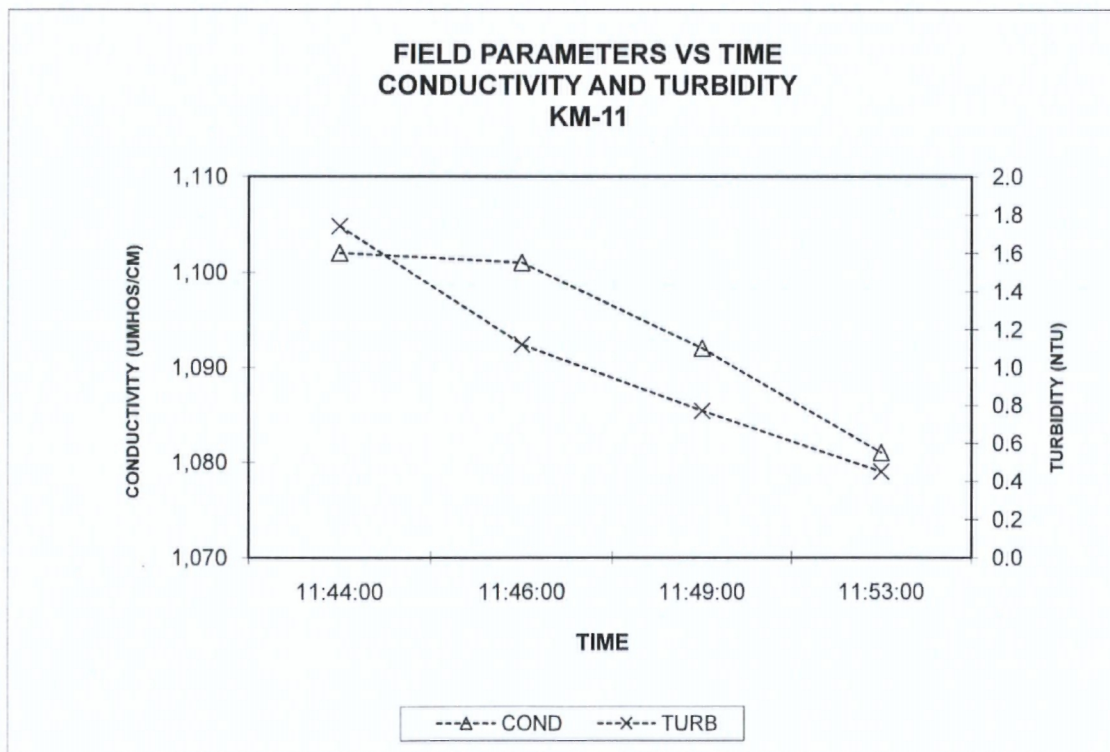
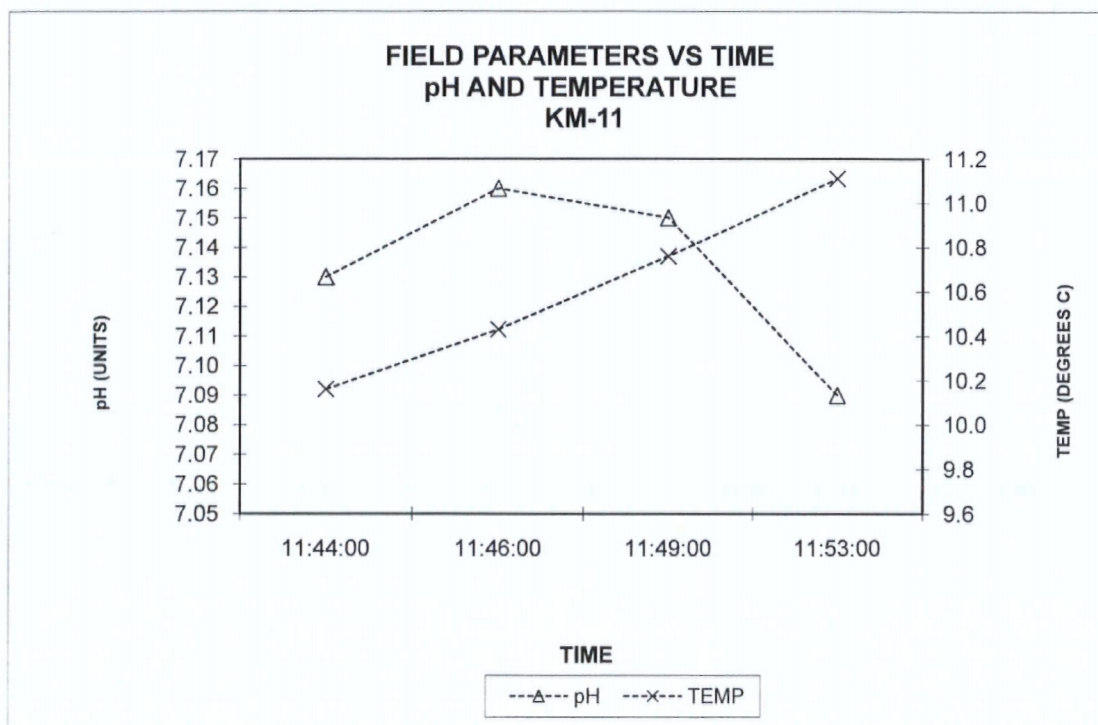


FIGURE 10

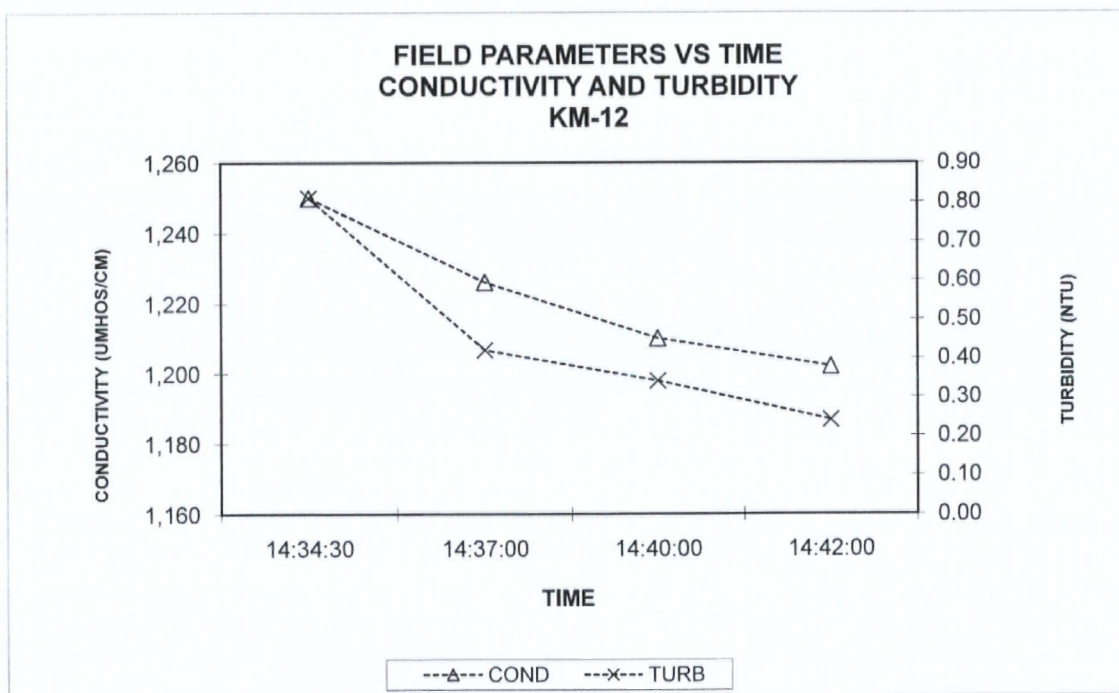
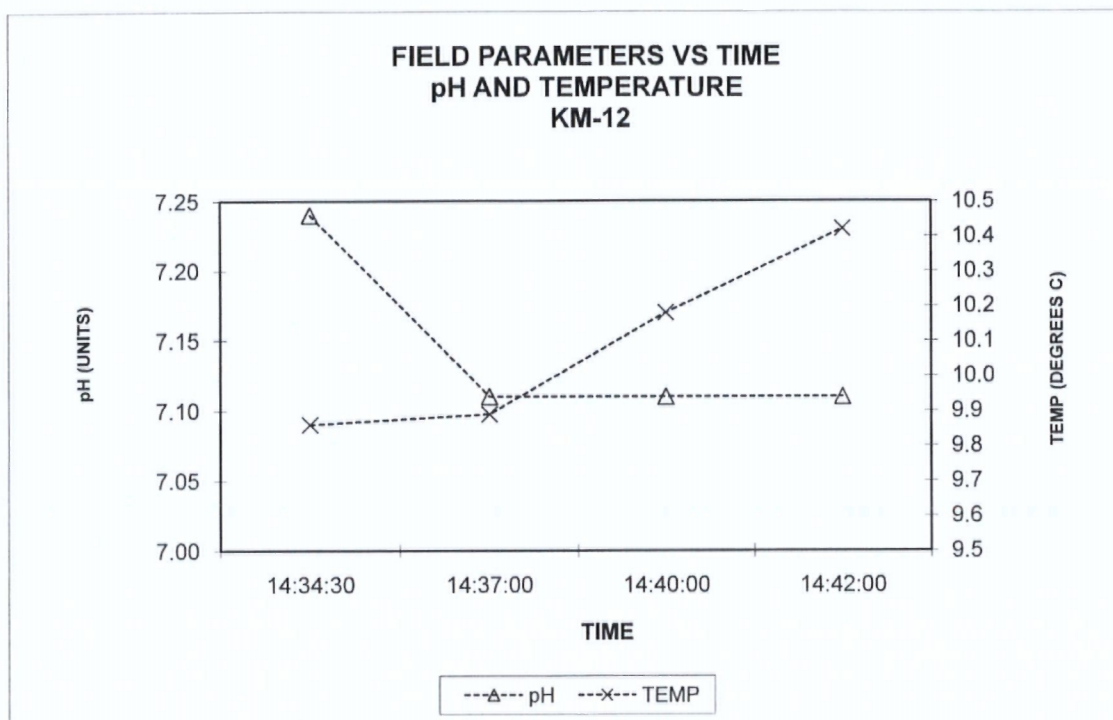


FIGURE 11

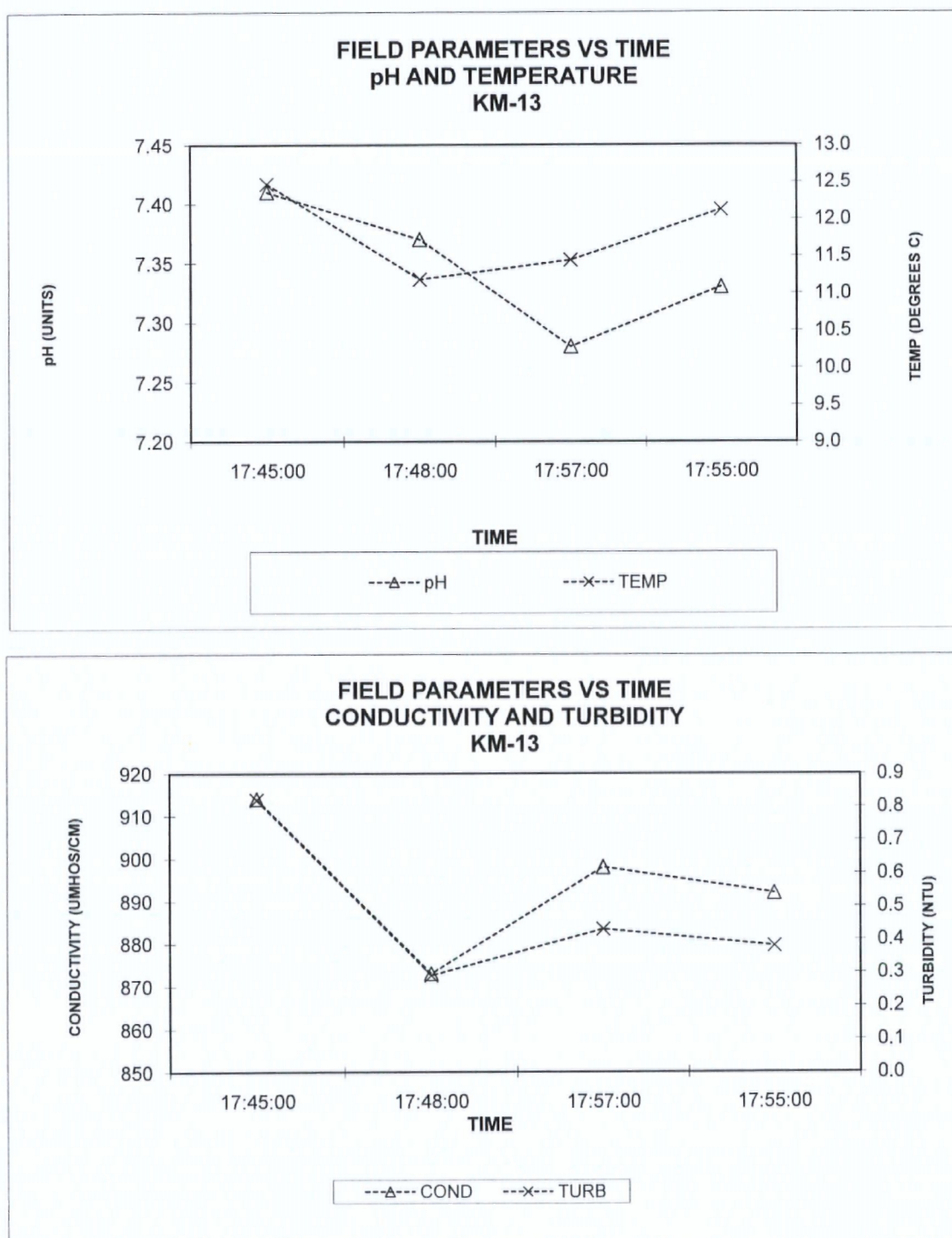


FIGURE 12

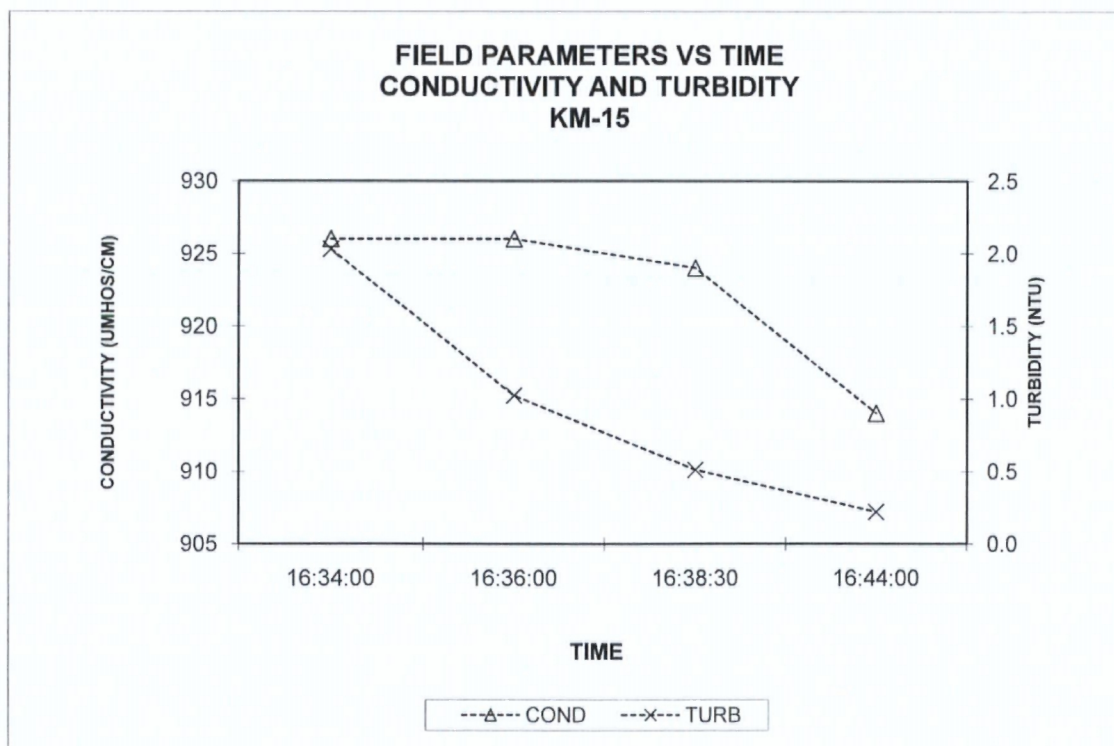
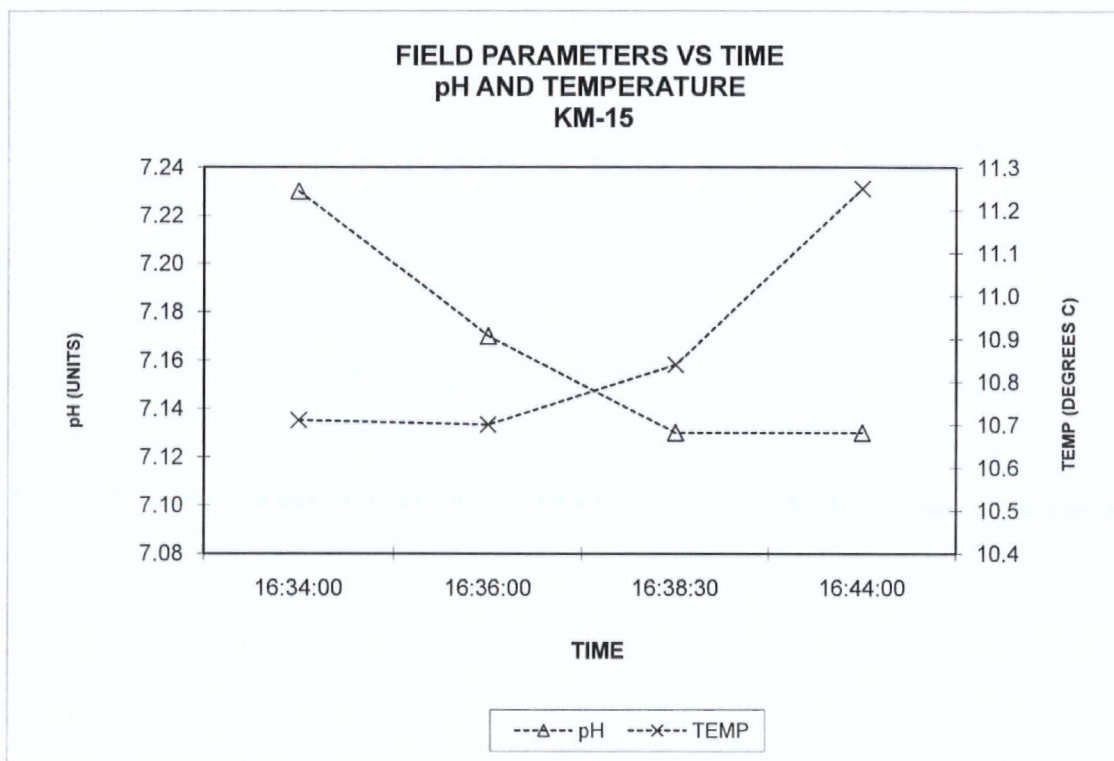


FIGURE 13

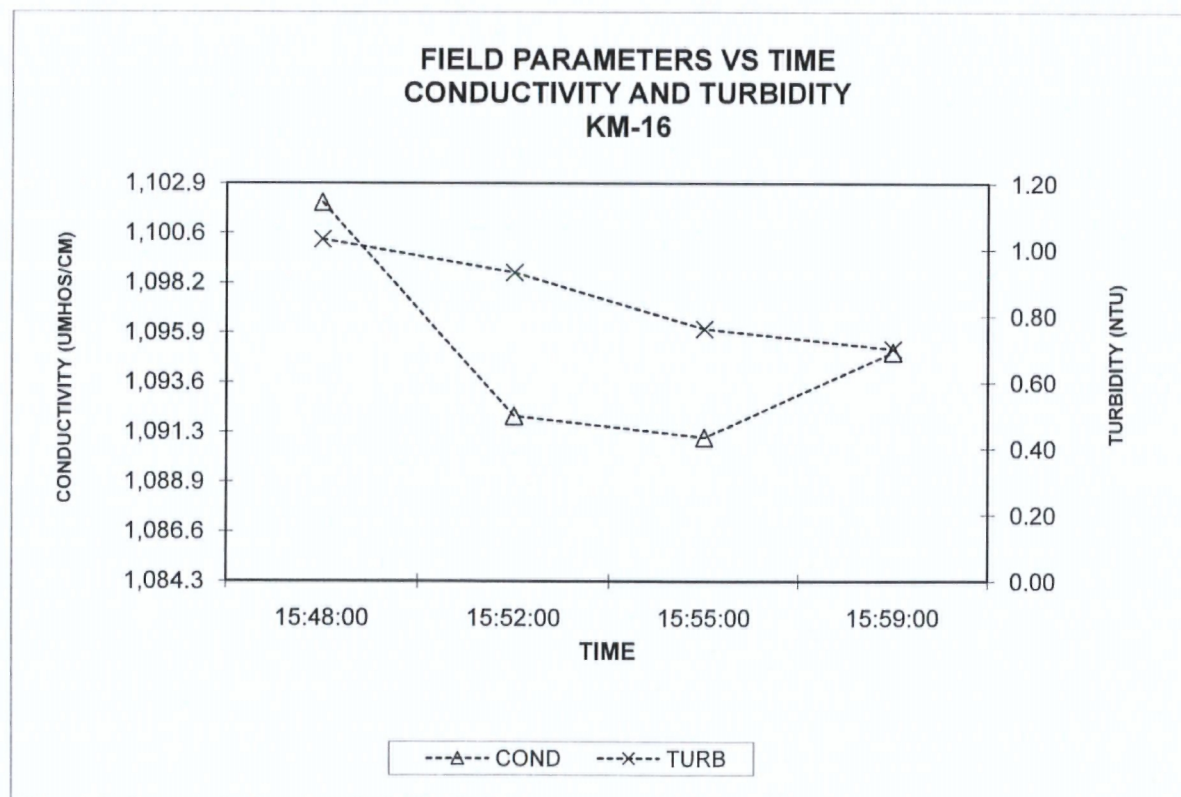
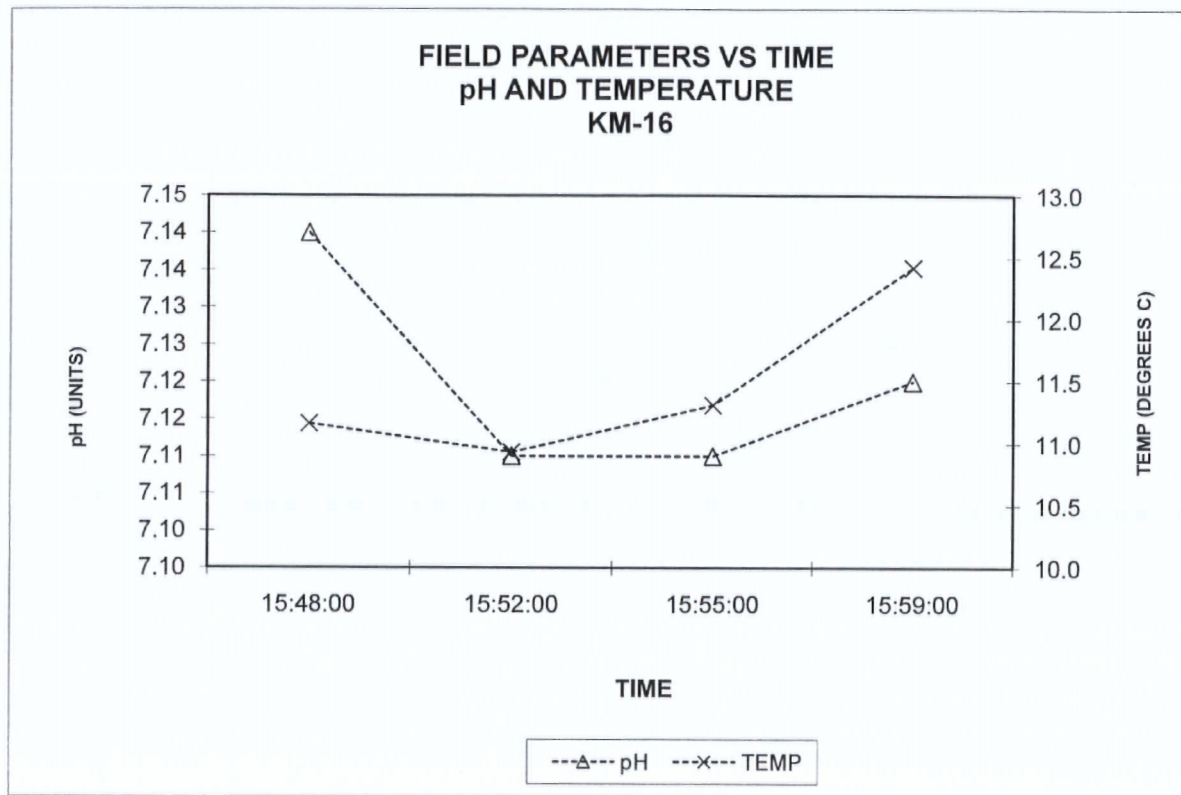


FIGURE 14

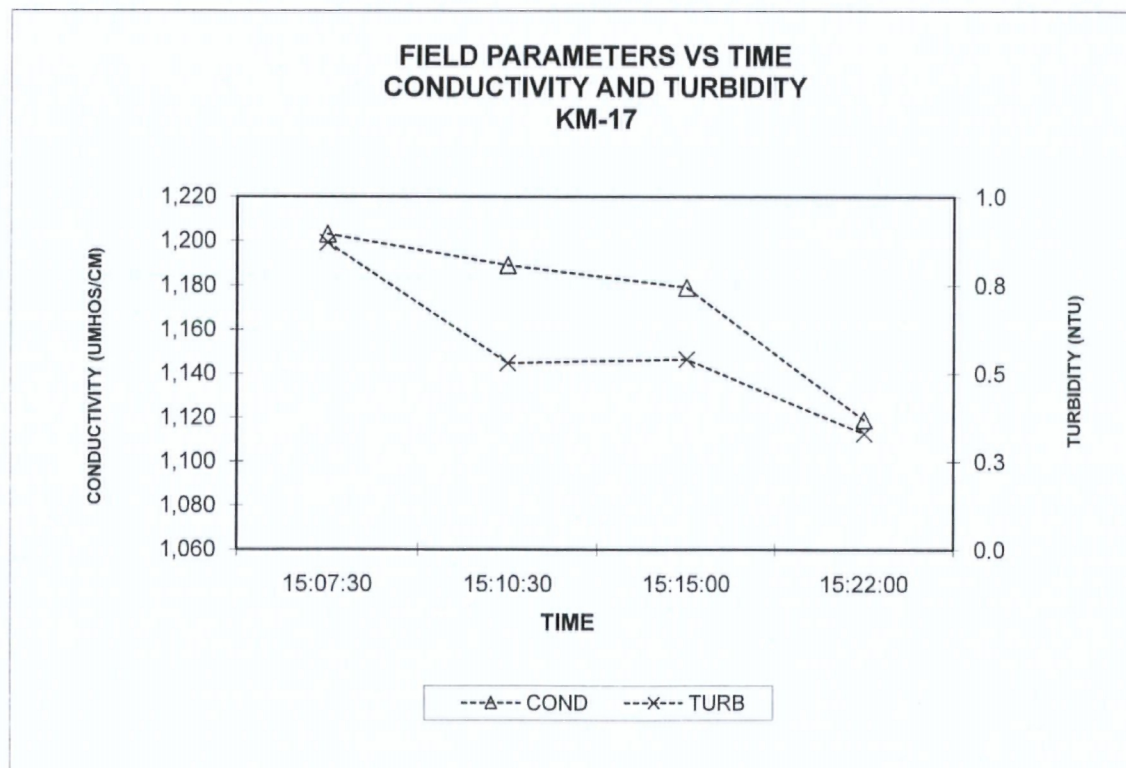
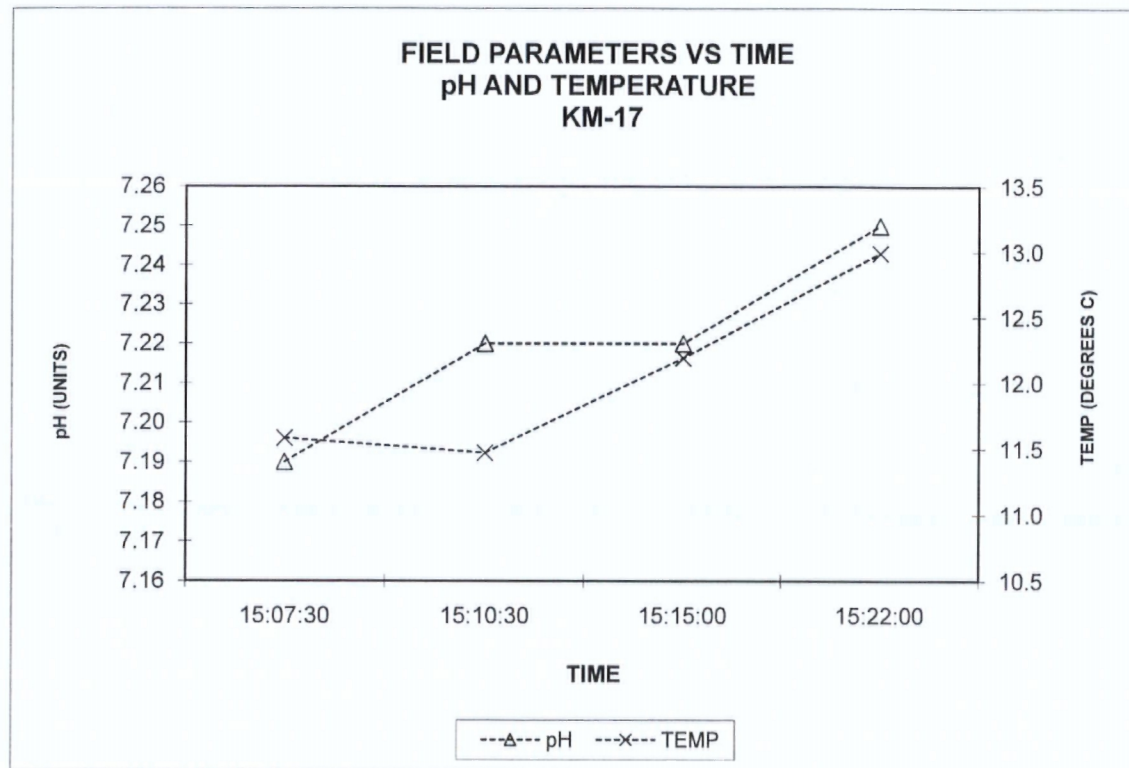


FIGURE 15

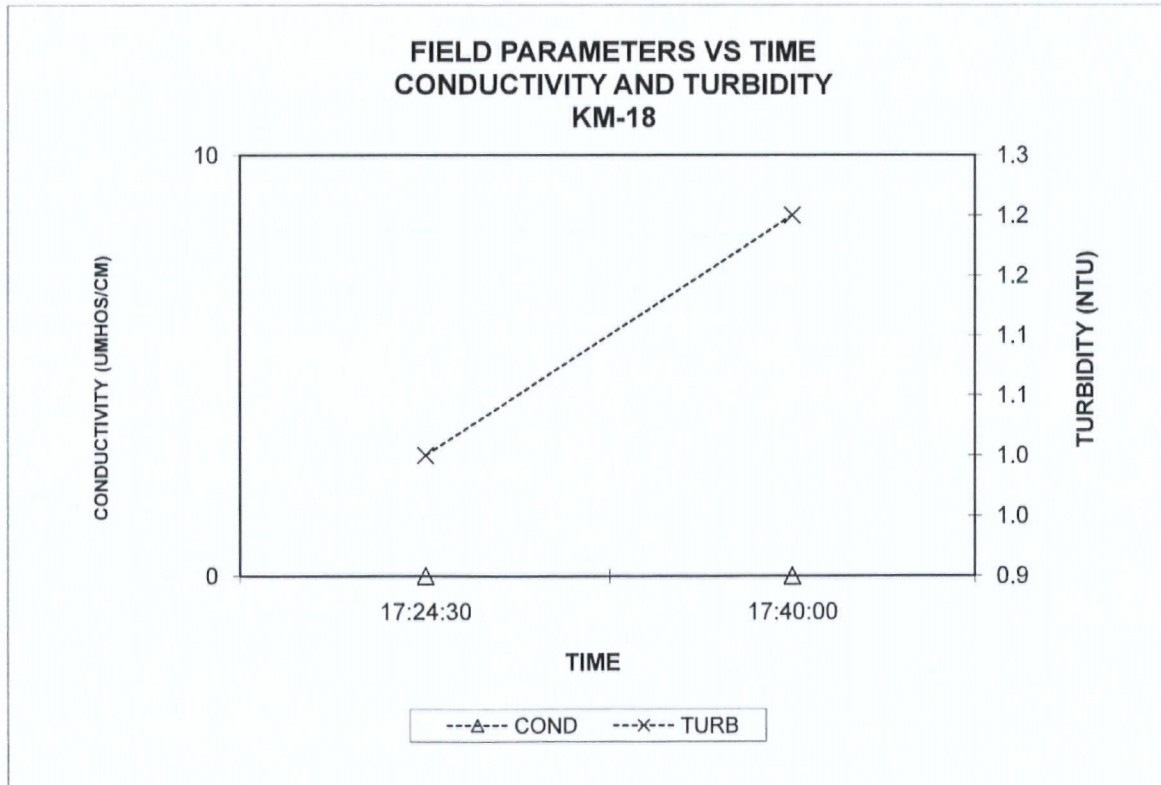
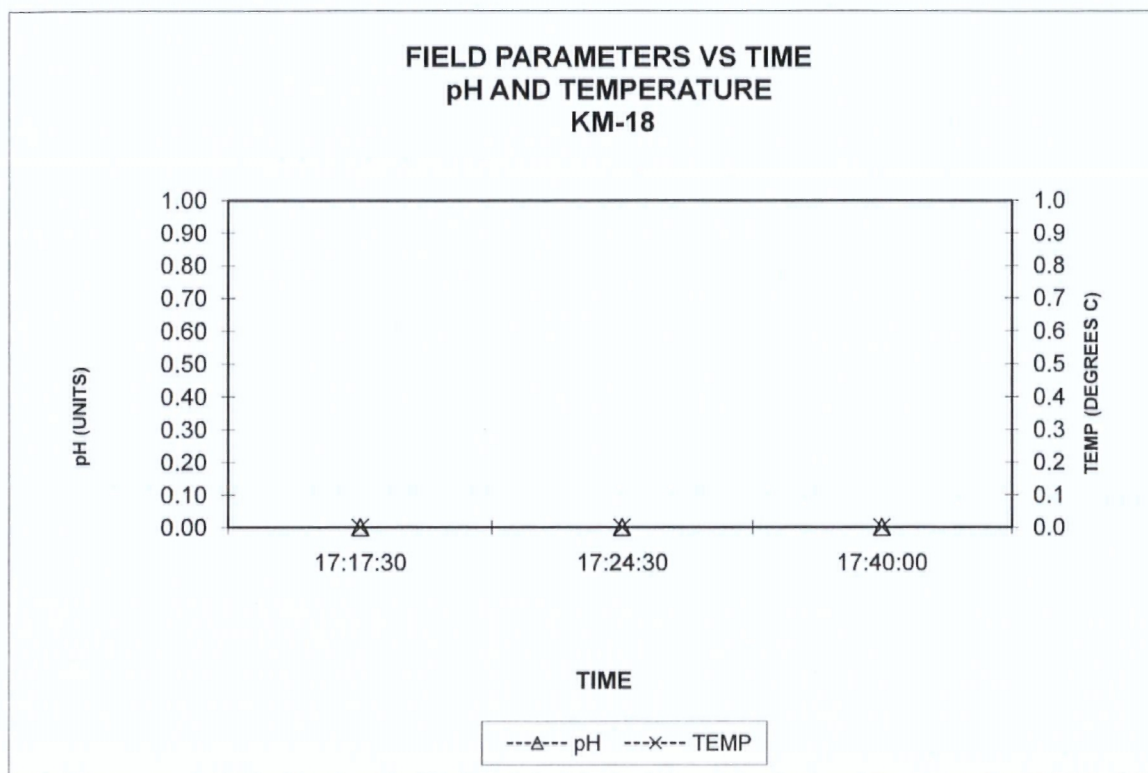


FIGURE 16

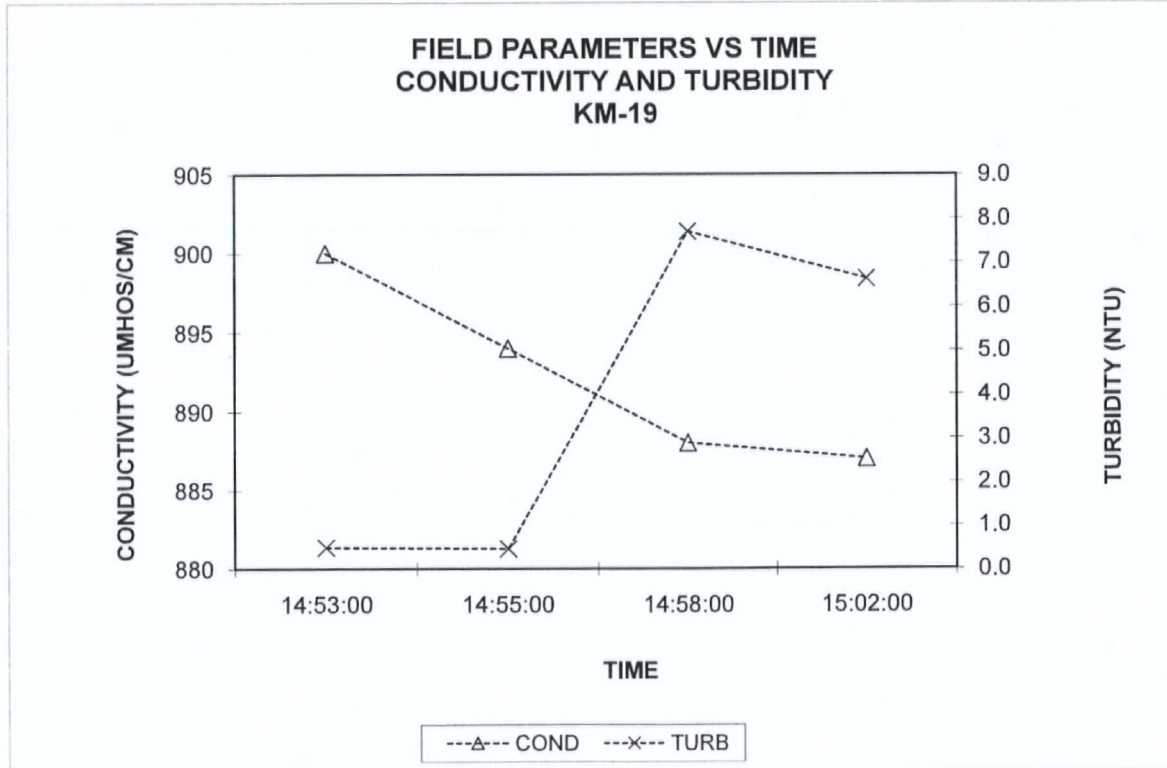
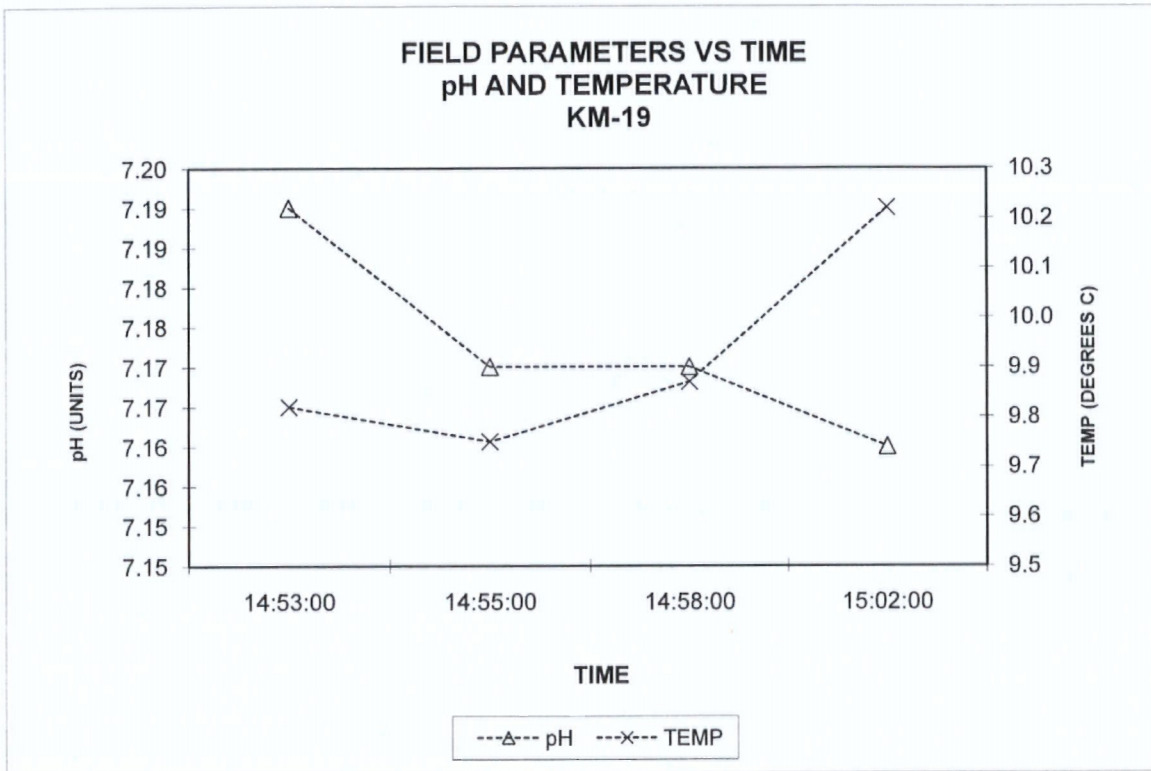


FIGURE 17

APPENDIX A
REMEDIAL DESIGN/REMEDIAL ACTION
ANALYTICAL DATABASE
(ON DISK)